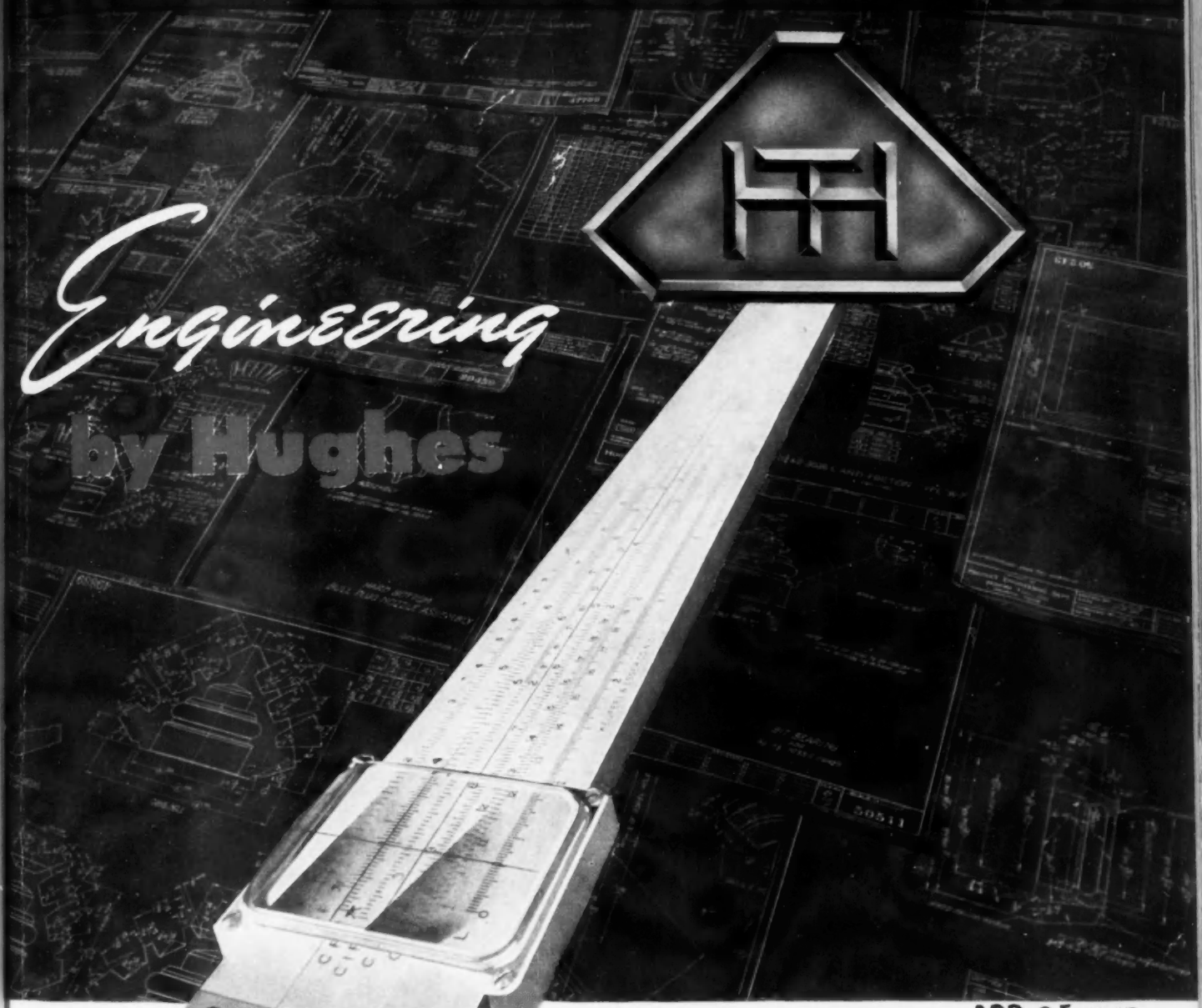
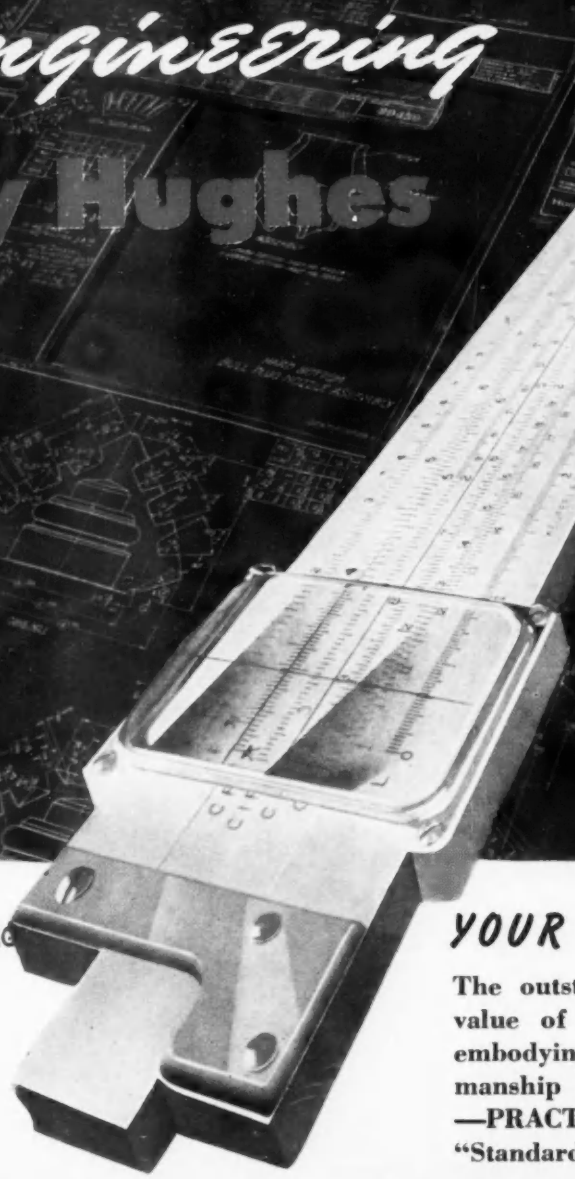
# The OIL WEEKLY

INTERNATIONAL AUTHORITY FOR THE PRODUCING AND PIPE LINE INDUSTRY



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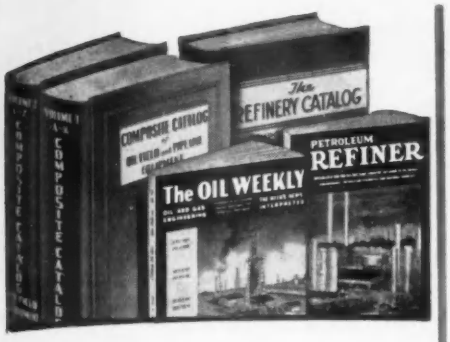


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THE GULF PUBLISHING COMPANY

The OIL WEEKLY and The COMPOSITE CATALOG for the drilling-producing-pipeline industry

PETROLEUM REFINER and The REFINERY CATALOG for the refining-natural gasoline industry

## LOOKING AHEAD
*. . . with the Editor*

THE natural gasoline and liquefied petroleum gas industry has gradually emerged from the position of a necessary evil to a recognized agency designed to aid in producing more oil and petroleum products at a lower cost. A combination of circumstances has been responsible for this, chief among which was the development of cycling plants and the growth of pressure maintenance to encourage secondary recovery.

The history of liquefied petroleum gas goes back as far as 1810 when an Englishman in London marketed a few cylinders of bottled gas. There followed a long period during which no notable progress was made even though experimenting was continued by various companies and individuals, both in this country and in foreign nations, with much work done in Germany.

By 1910, The Riverside Oil Company which was operating nine gasoline plants, was manufacturing liquefied petroleum gas and was the first company in this country to manufacture the product.

From that time on, progress was steady. By 1920 a number of oil companies were becoming active in exploiting and developing the business. The few years before outbreak of the present war brought intensive activity in production and distribution of bottled gas and the product supplemented natural gas in many industries and in localities where no supply of natural gas was available.

W. H. Harts, vice president, Warren Petroleum Corporation, Tulsa, traces the development of the industry and discusses its future in an article to appear in a forthcoming issue.

# THE OIL WEEKLY

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# A Positive Force

## Applied in a Perfect CIRCLE Makes the Best Cement Job

The Larkin Side-Action GEYSER Shoe distributes washing fluid and cement slurry with a positive force in a solid sheet from the entire circumference of the shoe . . . not just from intermittent side ports. It's a perfect circle. The entire 360 degrees of hole wall is cleaned of filter cake. The slurry is evenly distributed. High velocity jetting action creates a fluid turbulence all around, and at considerable distance above the shoe point. Thus is channeling minimized. And thus is your cement job . . . the foundation of your well . . . vastly improved.

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# The Outlook

Under Truman, administration policies most likely to change: Cut in government spending, industry freed from unnecessary restrictions, more latitude for department heads to run own agencies (less White House supervision.) Policies likely unchanged: International trade, Department of Justice anti-monopoly campaign, conservation of natural resources.

* * * *

Gas producers are hesitant to build facilities that will enable them to tie into interstate pipe lines for fear they will come under the jurisdiction of the Federal Power Commission. This may result in independent firms or individuals contracting for the gas at the well and constructing necessary facilities.

* * * *

Burnt by Canol, Congress will be skeptical about future military oil projects. Despite Navy pledge of no pipe-line or other facilities in Alaska unless substantial oil is found, the House slashed $500,000 off requested funds. See page 44.

* * * *

Discount reports of dickerings for purchase of WEP's two big pipe lines. Sale would be post-Jap war and only after careful congressional consideration especially of possible use as natural gas carriers.

* * * *

PAW operations will not slacken after V-E day, until military operations swing almost entirely to Pacific and domestic conditions improve. PAW's final dissolution depends not on end of war but upon "end of emergency for which PAW was created."

* * * *

Industry, rather than some government spend-for-work program, will be held responsible for those "60 million postwar jobs." Real problem: Not at close of war but 4 or 5 years later when pent-up demand for autos, radios, etc. is filled and replacement market has not yet opened.

* * * *

Less oil industry equipment will be required against Japan than was needed in Europe where several long pipe lines were built. Smaller land areas would be involved unless fighting in China develops extensively.

* * * *

The oil industry, along with other such essential programs, will get 1½ million tons of carbon steel and 264,000 tons of alloy steel to be released the first quarter after V-E day.

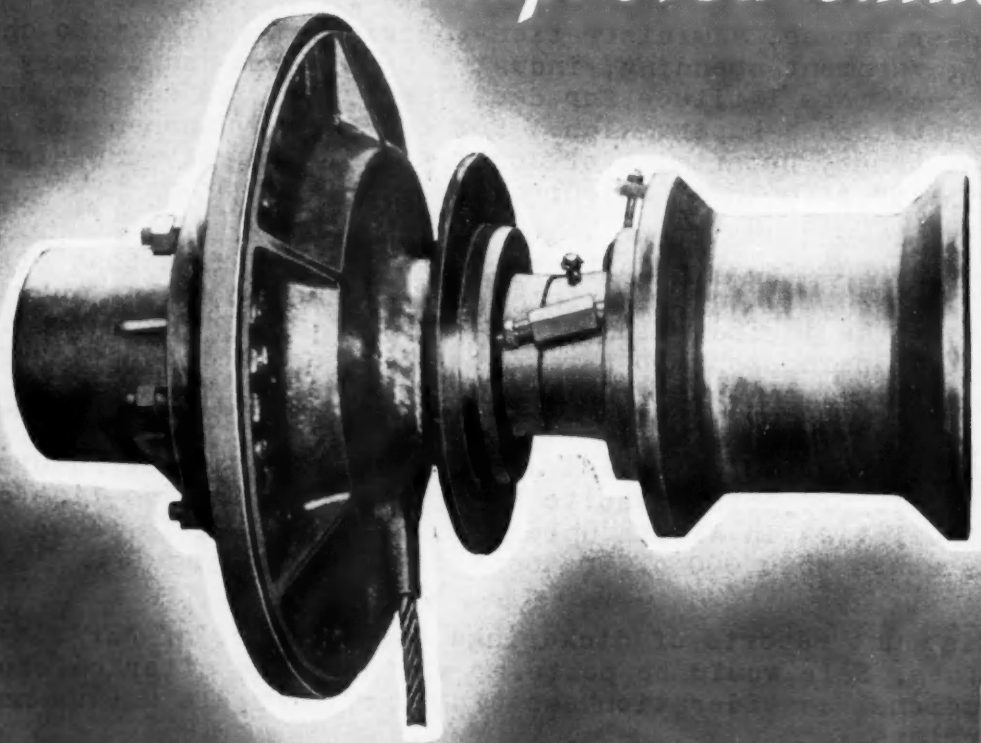
* * * *

Columbia County, Oregon, enters the oil prospecting column. One large company has taken a 25,000-acre lease. Two geophysical parties are active there and wildcatting should begin this summer.

* * * *

Venezuela and Colombia expect about 750 wells to be drilled or started this year with perhaps a score of wildcats each in Eastern Venezuela and Colombia and two or three in Western Venezuela.

# Again Foster announces a new improved cathead!



## The FOSTER MASTER BREAKOUT CATHEAD

### *This advanced model supersedes our hi-speed Cathead*

About a year ago we conceived the idea of making a breakout cathead on the same principle of our highly successful Spinning Cathead, incorporating all of its advantages, but having four times the pulling power and certain other improvements.

The result is this Master Breakout Cathead which supersedes the Hi-Speed Cathead. The Master Breakout has no positive clutch to engage accidentally or disengage under load; it eliminates shocks and metal-to-metal impacts; uses two revolutions of the lineshaft instead of "less than one," to break the joint; gives the driller constant control of power applied to the pull line. The drum is not in contact with any moving part when clutch is disengaged, therefore will not crawl. A year of field testing proves it to have the speed and power to unscrew the hardest joints with ease and safety.

After 19 years of inventing and developing means of screwing up and unscrewing drill pipe and casing, we sincerely believe the FOSTER JUNIOR SPINNING CATHEAD and THE FOSTER MASTER BREAKOUT CATHEAD to be the fastest, safest, and most economical arrangements ever devised.

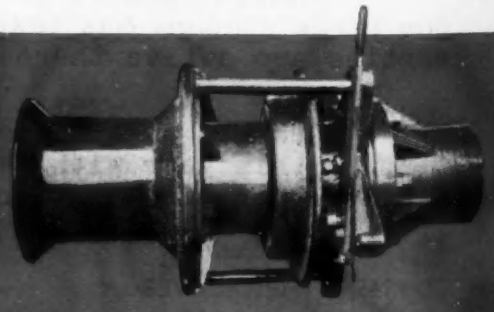
**FOSTER CATHEAD COMPANY**
**WICHITA FALLS, TEXAS**

## The Foster Spinning Cathead

*Junior Type*

The Junior Spinning Cathead is now made with an adapter hub to fit your shaft requirements and flanged on to the Cathead. This makes possible the use of the Junior Cathead on all types of draw works.

We recommend the Junior Cathead with the adapter hub, as it gives more room in the driller's position. It also unwinds easier and is, therefore, a little better liked by the drilling crew than the Standard. The power is equal to that of the Standard, since the clutch and drum are in the same ratio as in the Standard. It also costs less to buy.



# The Changing Panorama

## Big Jump Is Shown In Discovery Costs

IN SEEKING government permission to raise the price of crude oil, it has been stated repeatedly that drilling costs have risen sharply, causing the industry to experience higher costs in replacing the large volume of oil needed to meet war demands. Various attempts have been made to gather statistics proving this contention, but it is a difficult story to tell on an industry-wide basis because data are not available from the thousands of operating companies.

However, individual company records show the cost of discovering and developing reserve is much higher today. For instance, Humble Oil & Refining Company's annual statements show that the dry holes it drilled in 1944 cost about $105,000 each, whereas the dry holes of 1943 cost an average of but $62,000. Humble's cost of completing producing wells increased from an average of $30,000 in 1942 to $47,000 in 1943 and $66,500 in 1944.

The cost of drilling operations has increased greatly in recent years because of the larger proportion of wildcat wells, the greater average depth, and generally higher costs incident to the war. The average time required for drilling Humble's wells was 59 days in 1944, compared with 44 in 1943, and 26 in 1942.

"The fact that discoveries of new oil are running substantially less than they did during the previous decade," states Humble's annual statement, "while expenditures for exploration and development are now far above that level, demonstrates clearly that the industry's replacement cost is greater than the cost of oil now being produced. The current favorable operating results in the industry are due to high rates of production and the successful finding experience of the 1930's. The petroleum industry will experience substantially higher unit costs of production when output declines from the present abnormal levels and a larger proportion of the total is the high-cost oil found now and in the future."

*Technology is the great multipiler of our petroleum resources. The petroleum industry will probably continue indefinitely in the period of "multiple products."*

—Judge J. C. Hunter, Mid-Continent Oil and Gas Association.

*The oil industry increased its net working capital by $142,000,000 in 1943.*

—API Quarterly, January, 1945.

## Buying Production Is Cheaper Than Drilling

THE high cost of exploration activities as compared with present day sales prices, although the latter is much larger than in prewar, plus the need for additional crude reserves, are factors causing many companies to augment their drilling programs by buying producing properties. Buying crude production is cheaper than drilling for it today.

Union Oil Company recently announced that the acquisition of proved reserves by direct purchase during 1944 had increased the company's underground supplies by 24 million barrels. Drilling added 52 million additional barrels.

Also illustrative of the trend is the announcement by General Petroleum Corporation of the purchase of all outstanding capital stock of the R. R. Bush Oil Company of Long Beach. Chief among the properties acquired were 700 barrels per day production at Signal Hill and a half interest in a daily production of 7000 barrels at Santa Maria, California.

There have been many other examples during the past two or three years.

## Inexpensive Method For Making Thiophene

THIOPHENE can now be produced from petroleum by a relatively inexpensive method, according to Socony-Vacuum Oil Company, and the discovery is expected to open new fields in chemistry, especially in the pharmaceutical and dye-stuff industries.

The product resembles a benzene. It is colorless, heavier than water, and may alter the elasticity, brittleness, hardness and other properties of plastics. It also can be used to affect the color of dyestuffs and the physiological effects of medicines.

Cost of production by the new method is low enough to make it attractive commercially.

## Public Relations Down on the Farm

THERE is more than just a sales message in the farm show conducted by The Carter Oil Company in its seven-state Northwest division. As a good public-relations effort, the show takes a high place; as a good-will builder for Carter, it couldn't be improved on very much.

Mixing a wealth of company and industry information with a smattering of enjoyable entertainment, local color, patriotic educational themes, and food, the show has become well known in Idaho, South Dakota, North Dakota, Montana, Wyoming, Washington and Nebraska. More than 850 meetings have been held over a seven-year period and now many communities eagerly await and look forward to the annual "farm meeting."

The meetings take on the character of an informal, social get-together. There is always an interesting moving picture in technicolor with sound, a talk on patriotism, another moving picture usually with a rural theme and a setting that provides instructional and educational appeal to the farmer, a drawing for prizes which are products of The Carter Oil Company, and a "chamber of horrors" which illustrates in dramatic manner the mechanical tragedies resulting from faulty fuels, negligence and improper lubrication. Then everybody eats. Food is prepared usually by a group of women of the community.

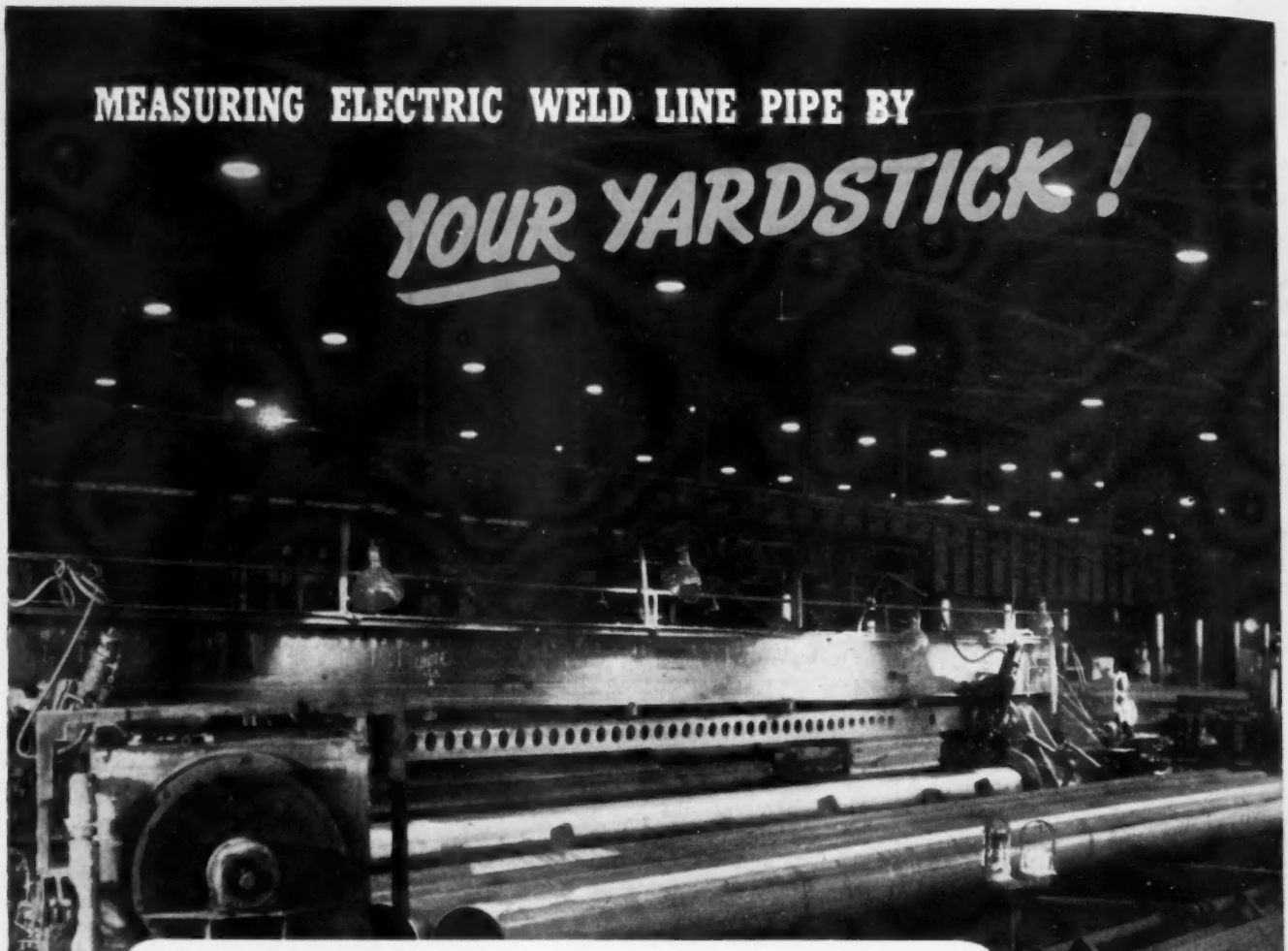
The show has been enjoyed by thousands of rural and town people throughout the Northwest division and has become an institution both with them and with Carter.

## Antidote to Poison That's Being Spread

THE methods of operation by the company, the policies it has pursued and the fair treatment given to its men have always made employment by it far more than just a job'."

The above isn't a pick-up from a theoretical discussion of the benefits that might be offered by some company to its employes. Instead, it is the heart of a letter from a Carter Oil Company pumper, soon to be retired after 40

# MEASURING ELECTRIC WELD LINE PIPE BY YOUR YARDSTICK!



THE test of quality is the performance of a product in the service for which it was designed.

Each length of Youngstown Electric Weld pipe you buy for gas, oil, water, or other purposes is hydrostatically tested to predetermined pressures...each lot is physically tested...each piece is carefully inspected. These tests are your "yardstick." Their value is indicated by the satisfactory service rendered by the thousands of miles of Youngstown Electric Weld pipe so measured.

When you design your next gas, oil, or water line, consult us. Tell us what pressures and special service conditions are to be met, so that our Engineering and Metallurgical staffs can work with you on specifications to meet your requirements.

Made in sizes from 6⅝" O. D. to 20" O.D., Youngstown Electric Weld Pipe is available now... either to API or other specifications mutually agreed upon.

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Pipe and Tubular Products - Sheets - Plates - Conduit Bars-Coke Tin Plate-Electrolytic Tin Plate-Rods-Wire-Nails-Tie Plates and Spikes.

years of service, to the president of the company.

The pumper says more: "During such period I have received many favors from the company in an official capacity and from the many of its employes with whom I have worked. For about 40 years I have found employment in the oil industry and almost 20 years of that time has been spent with The Carter. It has been a real pleasure to have been associated with such a fine organization."

It would be a worthwhile contribution if a canvass of American industry could be made to find how many people have been able to retire on benefits provided by the companies. Such a document would be very effective as an antidote to much of the poison now being infused into the minds of many of our people.

## Electronics Ready

WARTIME electronic developments, now at work in military radar equipment, hold rich promise for more than a dozen major applications in postwar entertainment and industry, according to Walter Evans, vice president of Westinghouse Electric and Manufacturing Company.

Speaking before the Baltimore Association of Commerce, Evans recently painted a bright picture of wartime developments in the electronics field which will serve peacetime America after victory. "Clearly," he declared, "there will be ample productive capacity to accommodate the most optimistic estimates."

Prominent in these developments will be television, of which Evans said: "It is our considered belief that all of the technical answers are on hand for a usable and acceptable television system."

His list of other industrial applications for which electronics will provide the seven-league boots of accomplishment includes: moulding of plastics, annealing of electrical steels, bonding of plywood, brazing and welding, hardening and tempering of metals, inspection of sheet metal and castings for porosity, dynamic balancing, vibration fatigue tests for materials, remote power line operation and metering, and high speed x-ray inspection of forgings and castings. These applications, Evans said, are not mere dreams of accomplishments to come at some dim and distant day, but are "ready-for-use applications which have been proven in the war production attained by American industry."

## Need for Increasing National Production

WAGE scales and market prices should be allowed to find the levels that will produce maximum employment and maximum national income through the bargaining processes of private industry, F. D. Newbury, vice president and economist of the Westinghouse Electric and Manufacturing Company, has said.

Explaining that his opinions on postwar wages were his own and not necessarily those of his company, Newbury told a production conference of the American Manufacturers Association, New York.

"I am in no sense recommending that wages be either lowered or raised, but recommend that we simply return to the prewar practice of bargaining. As soon as civilian business returns, it will be safe to allow bargaining to determine wage rates.

"All of the grand and impressive predictions of postwar employment and national income, currently publicized, may have no more weight than a film of cobweb floating in the air, unless a realistic wage and price policy, under which private industry can provide satisfactory levels of employment, is adopted and put into effect very soon."

Pointing out that if higher pay is expected we must have more efficient production, Newbury added:

"Total wages and salaries paid out over the long term must, if industry is to remain self-supporting and solvent, come out of total national production. Actually, a wage scale that is too high can reduce employment and total purchasing power."

He stated that higher wage scales have not appreciably increased the employes' share of national production and that the total wage and salary fund can be increased substantially only by increasing total national production and total national income.

## Coining Money With Common-Sense Ideas

COMMON-SENSE suggestions made by employes of Westinghouse Electric and Manufacturing Company in 1944, have saved the war effort better than one and three-quarter million dollars in labor and material costs. New and better ways of doing things resulted from these ideas.

Suggestion committees in the different plants approved 14,867 of the ideas and put them to work. For the ideas the company paid to its workers, $186,921. Charles R. Riker, coordinator of the Westinghouse suggestion system, said "Suggestions have played a large part in helping Westinghouse meet production schedules despite manpower shortages and scarcity of materials. They have also helped to increase safety.

Suggestions covered all phases of plant work from apparatus and products to shop methods and tools, as well as plans for the welfare of fellow workers.

Most of the useful suggestions, it was explained, required no technical knowledge or special training. "They were based on common sense," Riker said, "—but somebody overlooked the idea until the suggester handed in the idea."

## Office Boy—President

A FACT commonly overlooked by many people who are inclined to think of business in terms of "large" or "small" is the interdependence of all business groups to a greater or less degree. It is easy, when segregating the parts of any industry, to fail to see the relation of that industry to the whole economic picture.

For example, as an illustration of the falsity of division between "big business" and "small business," R. T. Haslam, director of Standard Oil Company (New Jersey) pointed out recently that his company does only eight percent of the nation's gasoline business and 12 percent of its total pertoleum products business.

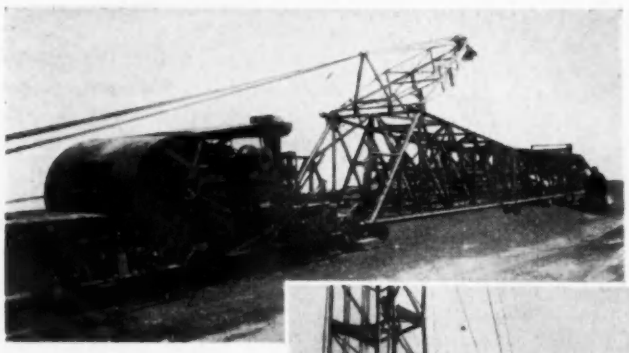
This great company, he said "depends upon thousands of small independent oil companies for its supply of crude oil; the oil it produces itself is obtained under leases from some 10,000 farmers and landowners who each year derive roughly $1300 per year in royalties; and the company's refined products are marketed through more than 20,000 individual jobbers and service station owners." He also stated his company even makes loans to such small businessmen, based not on collateral but on character.

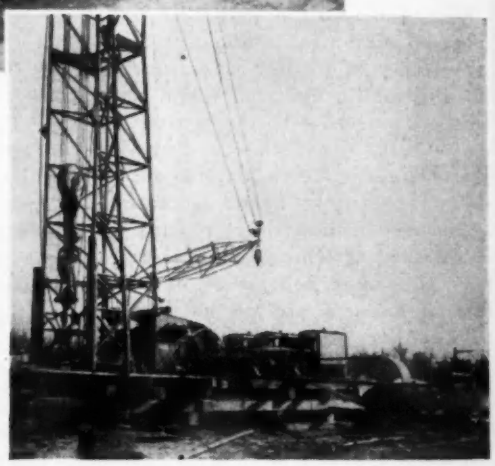
"An outstanding characteristic of American industry," he explained, "is the constant flow of personnel from shop bench to office desk. We have a saying in our company, for instance, that whenever a president of Jersey Standard dies or resigns, we hire a new office boy."

# WHAT IS A RIG ?

## FRANKS Has Made Obsolete the Ordinary Manufacturer's Definition of Drilling Rig . . .

*Why ?*





*Franks Model SAL 6000. Top shows 96 ft. derrick ready for raising and below unit in operating position.*

**Manufacturers of oil well drilling equipment have given various definitions of the word "rig," usually depending on the amount of equipment each furnishes toward a complete outfit. Some have called a drawworks or a drawworks plus engine unit a rig. But Franks has given a new definition to "rig"—making it mean a complete balanced unit covering everything except drill pipe, drill pipe accessories and small tools. Here's what Franks offers as its Model SAL Type Skid Rig: drawworks; catheads including regular at driller's position, automatic at opposite end of catshaft, and double drum conveniently located in center of catshaft facilitating spinning and tonging up; two or three engine power plant with facilities for compounding to any drive; pump and pump drive including drive pulley and "V" belts; rotary table and propeller shaft rotary table drive; master bushings; drive bushings; slips; derrick with self-contained boom raising device; crown block; stacking board; stanpipe; swivel; kelly; and all controls for pump, engines (with facilities for compounding), and rotary table ready for instant hookup. No other rig manufacturer offers such a complete rig.**

**Not only do you get the most complete rig when buying a Franks Model, but you also get:**

**1. The most balanced rig on the market, as all parts are designed to operate as a single unit.**

**2. The rig offering the fastest rig-up and tear-down. It is made in two parts, power plant and drawworks, easily connected or disconnected by Franks patented pilot frame joints. The unit including derrick may be moved in two pieces for short field moves. Only a matter of hours required for rigging up after reaching location.**

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WELL SERVICING AND DRILLING UNITS
TULSA, OKLAHOMA

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**Supply Companies**

Franks Skid Type Rotary Drilling Rigs May be Purchased from Mid-Continent Supply Company and Jones and Laughlin Supply Company.

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**Texas, Louisiana, New Mexico:** R. M. White, 823 Neil P. Anderson Bldg., Fort Worth, Texas

# The Week's News

LAST week brought the first government seizure any oil facility as a result of labor troubles, with PAW taking over the Cities Service refinery at Lake Charles, Louisiana, closed down by one of the most peculiar situations so far encountered—a strike based on allegedly excessive rentals charged in a nearby housing project. Page 45.

**Fewer Workers Drafted**—Experience under the Selective Service program for inducting heretofore-deferred workers in the 18-30 age group indicates that many more will be kept in their jobs than originally feared. Page 47.

**Alaskan Exploratory Funds Cut**—The House Appropriations Committee sliced $500,000 off a $1,620,000 fund sought by the Navy for Alaskan oil prospecting, more than hinting that Congress will support no more Canol projects. Page 44.

**Carbon Black and Flare Gas**—A very muddled carbon black situation is causing concern in Washington, where OPA is urging other agencies to exert such authority as they may find to channel gas now being flared to plants which can use it. Page 45.

**Production Cost Queries**—Questionnaires regarding costs of production have been sent out to a hand-picked group of operators with renewed warnings that replacement costs will not be considered in determining adequacy of existing crude price ceilings. Representative Boren, Oklahoma, has introduced bill in Congress requiring pricing of oil on a parity basis. Page 48.

**Oil Pact Discussion**—Members of the PIWC National Oil Policy Committee had lengthy sessions with administration officials on the Anglo-American petroleum agreement, taking the position that unless the State Department agrees to the inclusion of an antitrust provision, industry cooperation will be withdrawn. Page 44.

**Drilling Cost Legislation**—A definite plan for legislation dealing with the drilling cost option, touched on in the recent F.H.E. decision, is being perfected and details will be announced soon. Page 46.

**Strikes and Demurrage**—Interstate Commerce Commission amended its demurrage regulations, providing that charges shall not run against tank cars which cannot be loaded or unloaded within the allotted free time because of strikes.

**United Gas Hearing**—FPC will open hearings April 23 on the application of United Gas Pipe Line Company for a 142-mile 24-inch line from the Carthage field, Texas, to Ouachita Parish, Louisiana. Page 81.

**Texas Gas Measure**—Slight differences are noted in the newest Texas gas conservation measure, but it's plain that the legislature wants transmission lines to pick up flare gas. Whether bills will reach final enactment is doubtful. Page 47.

**Pauley for Ickes?**—Washington puts little credence in the report that Ed Pauley may succeed Ickes as Secretary of the Interior. Page 46.

**Oil and Gas Policy Group**—A Washington meeting to discuss probable duplication of FPC and other hearings relating to gas reserves, etc., resulted in appointment of an inter-industry committee on oil and gas policy which will present its problems to the O'Mahoney Senate committee in hopes of forestalling FPC action. Story below.

**May Certification Figures**—Crude production will again be stepped up in May, PAW announced. California is over the million-barrel mark by reason of a 28,200 daily increase. Page 46.

**Lend-Lease Bill Signed**—First legislation signed by President Harry S. Truman was the measure extending until June 30, 1946 the Lend-Lease Act, under which more than $1,500,000,000 worth of petroleum products has been shipped to our allies. The new measure definitely classifies lend-lease as a war aid, through a provision that nothing in the act shall be construed as authorizing the president to enter into an agreement with any foreign government for postwar relief, rehabilitation or reconstruction.

**German Oil Wiped Out**—End of strategic bombing of German war industry found 95 percent of her crude oil resources and 75 percent of her synthetic oil refineries wiped out. Gasoline production has been cut to 4 percent of normal, rubber production cut by 90 percent, other war production reduced in like proportions.

**PIWC May Meeting**—Drilling cost option legislation, Anglo-American oil pact, FPC hearings and the materials situation, expected to change as V-E day approaches, are down for discussion at the next PIWC meeting in May.

## Industry Representatives Seek to Prevent All-Out Gas Probe by FPC

Plans for a campaign to prevent the Federal Power Commission from making its projected all-out investigation of natural gas reserves, which threatens to invade the field of oil and raises possibilities of attempted control of oil operations by the commission, were discussed in Washington, April 19.

Present at the meeting were members of the PIWC National oil policy committee and, representatives of a large number of oil and gas associations, the Interstate Oil Compact and state regulatory bodies. Because oil and natural gas are tied so closely together that what affects one affects the other, the representatives of the two industries worked in harmony on what is felt to be a threat to both. Oil men expressed concern about the FPC reaching out into a field which would bring it into conflict with other agencies, federal and state.

There was a definite feeling that Congress, which set up the commission and established its authority, should make the investigation projected by the FPC, and it was pointed out that the O'Mahoney Senate Special Committee Investigating Petroleum Resources will get into the field which the commission would cover.

A special inter-industry Committee on National Oil and Gas Policy was set up, composed of William R. Boyd, Jr., president of API and chairman of PIWC; J. C. Hunter, president of Mid-Continent Oil and Gas Association; Russell B. Brown, general counsel of the Independent Petroleum Association of America; E. Budress, president of Independent Natural Gas Association, and French Robinson, president of American Gas Association.

The committee met April 20 to plan studies of the basis of an over-all presentation of the problems of the oil and gas industry to the O'Mahoney committee.

The Senate committee is expected to make its investigation before FPC gets its probe under way. Accordingly, it is hoped that some way can be worked out to avoid duplication of effort while at the same time it is felt that the oil industry will be better protected if questions of its regulation are dealt with directly by Congress rather than through a government agency which will make recommendations for legislation on the basis of its own findings.

Discussion of the problem raised by

the FPC investigation was based on recommendations for a national oil policy presented by George A. Hill, Jr., president of Houston Oil Company of Texas, member of the committee appointed by Governor Coke Stevenson to aid in determining the position to be taken by the state.

Their recommendations called for private enterprise in the oil and gas industries, continuance of state jurisdiction over conservation, and action by the government only to encourage the industries to continue their development of new reserves.

Hill declared that a sharp line should be drawn between federal and state jurisdiction, and FPC authority should be specifically defined. He opposes invasion of the oil or gas fields by the government.

## Gas Producer Reported In Vicinity of Reynosa

Mexican Petroleum Administration has announced completion of a gas and distillate well to open a new Mexican field 20 miles west of Reynosa, Tampaulipas. The well, known as the Mision 1, is credited with making an estimated 3 million cubic feet of gas daily along with an unestimated amount of distillate.

The petroleum administration is reported outlining a drilling campaign for the Reynosa field.

The administration also announced completion of the Poza Rico 18, in the Poza Rico field. This well is reported flowing 8500 barrels of oil daily. Four other wells in the Poza Rico field are said to be near completion.

## Postwar Highway Program Being Studied in Venezuela

Three postwar road-building projects are being studied by officials in Venezuela. These would connect important oil fields in the State of Falcon with Maracaibo and Caracas. Another project considered would shorten the road distance between Maracaibo and Caracas by 90 miles.

A five-year road construction program for the country was also discussed. All the projects being considered will cost about $80,550,000, and were proposed by the Second Congress of Venezuelan Engineers and presented to the President of the Republic for consideration.

Approximately 460 miles of road are suggested for each of the five years, this mileage to consist chiefly of extensions or improvements of the present national highway.

## Texas Well Permits

The Texas Railroad Commission last week issued permits for drilling 107 new wells in Texas. There were 27 from Southwest Texas, 23 from West Texas, 19 from North Texas, 14 from the Gulf Coast, 10 from West Central Texas, 8 from the Panhandle and 6 from East Central Texas.

# PIWC Group and Officials Discuss State Department's Pact Resistance

Members of the PIWC national oil policy committee, Deputy Administrator Davies and other officials April 18-19 discussed the State Department's resistance to inclusion of an anti-trust umbrella in the pending Anglo-American petroleum agreement.

The oil men, already disturbed over reports of secret agreements at the Yalta meeting of the "Big Three" which have not yet been clarified, were represented as desirous of having a showdown on the oil pact, with possibilities that the industry may adopt a position of "no antitrust provision, no agreement."

Assistant Secretary of State Will L. Clayton sat in with the conference for a time, as did Administrator Ickes, but Charles B. Rayner, petroleum adviser of the State Department, was not present.

It was learned that this did not turn out to be a final meeting, and further conversations are expected to be held with the State Department.

An opinion from the Department of Justice is understood to have been sent to the meeting and read to the committee by Davies as the basis for discussion, but no representative of the department attended.

While the antitrust provision was the major subject of concern, other phases of the agreement also were reported to have been brought up.

The agreement has been held up for weeks in the State Department which dissents with the view of all members of the President's Cabinet Committee that such a provision should be included. Secretary Ickes recently expressed impatience with the situation, indicating that the president might shortly be asked to prod the department.

Failure of the department to meet industry demand for protection without which it is admitted no agreement can be put through, may lead to the matter being laid before president Truman.

Meanwhile, there were suggestions that legislation enabling the Department of Justice to make declaratory rulings on antitrust cases which will be final may come out of hearings on oil policy and other matters which have been scheduled by the O'Mahoney Senate Special Committee on Petroleum Resources. The committee has arranged tentatively to start its hearings about May 1, with the likelihood that they will continue over a long period.

If the suggested legislation is enacted, it might serve to cover any situations arising out of operations under the treaty, with the department announcing its position before any program is put into effect, but it will be many months, probably, before Congress is asked to pass on such a proposal.

While the Senate group is ready to begin its investigations, the House Interstate and Foreign Commerce Committee, which also has outlined a long list of investigations, is seen as unlikely to get to work on oil for some weeks, at least. Chairman is Clarence F. Lea of California who has not named members of the group.

## Committee Trims Funds For Alaskan Exploration

Less optimistic than the Navy over the possibilities of Alaskan oil production, the House Appropriations Committee last week cut $500,000 off a requested $1,620,000 fund for exploratory work, saying in a report that it believed it would be possible with the $1,120,000 to establish whether there exists a reserve upon which the Navy might depend.

The department has $1,000,000 for the work this year, with which it has acquired and transported to Alaska surplus Army equipment with which to drill to 5000 feet with 4½-inch drill pipe and to 7000 feet with 3½-inch pipe at Uniat, in the main Brooks Range.

The work is under Commander B. W. Gillespie, experienced oil man, who showed the committee a small bottle of seepage oil picked up at the base of Uniat Mountain which on ordinary distillation test yielded 25 percent gasoline, 45 percent diesel oil and the remainder Navy fuel.

A drilling rig already has been sent from Point Barrow to the Uniat Mountain structure, and a second rig will be sent to Point Barrow this summer, to be moved to Cape Simpson in the fall after the ground freezes. It is planned to drill at those two points and to make preliminary studies of a route to move the oil out by pipe line.

Captain W. B. Greenman, in charge of naval petroleum reserves, told the committee the department desires to renew its contract with DeGolyer and MacNaughton as expert advisers in connection with the activities in California and Alaska. The firm has served the Navy in connection with the Standard Oil contract for the development of Petroleum Reserve No. 1. The cost of the firm's services to the government runs about $10,000 a year.

## Back Issues Needed

THE OIL WEEKLY is in need of the May 12, 1941, "International issue" and the March 18, 1935, "World Oil Survey" numbers of the magazine. Please address Editor, THE OIL WEEKLY, Box 2608, Houston 1, Texas.

## Seizure of Flare Gas Discussed

**A directive requiring producers and handlers of gas being flared to channel to carbon black plants may be the outcome of carbon black manufacturers' claim that they could produce anywhere up to possibly another 100 million pounds a year with little more than a tightening up of their present equipment but cannot get the gas at today's prices, which range around 1½ cents per 1000 cubic feet.**

**A request for a price of about 3½ cents per 1000 feet is pending before OPA, but that agency has little information regarding the costs of this gas, which ranges from a by-product of oil production in some areas to a main product in others.**

**Washington hears that 1½ billion feet a day is being flared in Texas, with owners refusing to put any of it into pipes at present prices and the Texas Railroad Commission unable to stretch the conservation law to force them to do so.**

**OPA has discussed with Stabilization Director W. L. Davis the possibilities of government seizure. It also has asked PAW and WPB to say whether either of those agencies has any wartime authority which could cover the situation.**

**OPA officials are concerned because lack of carbon black is holding down tire production, but view the demand for an increased price for gas doubtfully since the practice in the past has been to sell the gas for a percentage of the price of the products taken out of it—propane, etc.—and carbon black.**

**WPB recently announced a program for expansion of carbon-black manufacturing facilities, but this is a long-term program whereas, it is pointed out, an important addition to carbon black supplies might result if manufacturers are given gas supplies they claim to need.**

# Government Seizes Lake Charles Refinery to Stop Gasoline Loss

A substantial loss of aviation gasoline production by reason of the strike at the Lake Charles, Louisiana, refinery and butadiene plant of Cities Service Refining Corporation was reported last week by Administrator Ickes as he took the plant over in the name of the government.

Ickes, acting under an executive order signed April 17 by President Truman, said the exact amount of production lost could not be disclosed for security reasons, but indicated it was so considerable that for the first time during the war, it was deemed necessary for the government to take over an oil establishment.

The administrator emphasized that there was no difference between management and labor involved in the strike and no quarrel between the government and the company, saying that "the relationship between PAW and the Cities Service organization has been most satisfactory at all times and has left nothing to be desired.

"So far as PAW is concerned," he added, "we have no opinions concerning the merits of the dispute between a group of refinery workers and their landlord. It is our job to see to it that the production of essential war petroleum products is maintained. This is our only interest."

Operation of the $75 million refinery was halted on April 9, when a number of workers refused to return to work and forcibly prevented others from doing so because of a dispute over the rents of a nearby Maplewood housing project. The strike was not authorized by union officials, who urged that protection be afforded employes who wanted to work, so that production could be resumed.

The shut-down of the Cities Service refinery also affected the government-owned butadiene plants operated by Cities Service, producing butadiene for the manufacture of synthetic rubber at Firestone Tire and Rubber Company plant at Lake Charles.

## *International Trade Meet Hoped for by Stettinius*

Plans for a conference of the principal nations to discuss formation of an international trade organization, to deal with the trade problems of oil and other commodities in international commerce, may be perfected at the security conference opening in San Francisco this week, in line with the desire of Secretary of State Stettinius quickly to lay the foundation for postwar trade relations. Hoped for late this year, it would consider international commercial policy, tariff reductions, elimination of restrictive trade barriers and cartel arrangements.

The major drawbacks to expansion of American export trade in immediate prewar years came from so-called hidden trade barriers, largely internal regulations of foreign countries which put our products at a disadvantage. The administration is anxious to have these leveled so that postwar trade can develop naturally. In return might be offered a further lowering of our tariffs, under legislation to extend the reciprocal trade agreements act.

The proposed world trade organization would be within the framework of the world security organization, and is likely to be considered in the Economic and Social Council to be set up at San Francisco.

Arrangements looking to the solution of problems relating to international trade will be undertaken by treaties and other types of agreement. Whether the latter includes executive agreements which need not be submitted to the Senate for ratification has not yet been developed.

## *Saudi Arabian Princes Visit Texas Oil Centers*

Headed by H. R. H. Amir Faisal ib Abdul Aziz, second son of the King of Saudi Arabia and himself viceroy of Hedjaz and foreign minister of Saudi Arabia, five Saudi Arabian princes, sons of King Ibn Saud, and six shaikhs, constituting the Saudi Arabian delegation to the San Francisco conference, visited Texas and Louisiana oilfields and refineries during the past week as the guests of The Texas Company.

The party was accompanied by a representative of the United States State Department and several officials of The Texas Company and the Arabian American Oil Company. Field trips and a visit to The Texas Company's Port Arthur refinery were participated in by the group with apparent unflagging interest. One of the princes, Amir Nawaf ibn Abdullah El-Faisal, is only 12 years old, but while his inquiries related to cowboys and wildwest movies, he bore up manfully in the receptions and dinners accorded the party.

Due to the death of President Roosevelt, previous plans for a more elaborate entertainment for the princes and their associates, were cancelled.

Those in the party were: Amir Faisal ib Abdull Aziz, Amir Mohammed ibn Abdul Aziz, Amir Fahad ibn Abdul Aziz, Amir Abdullah El-Faisal, Amir Nawaf ibn Abdul Aziz, Shaikh Hafiz Wahba, Shaikh Asad El-Fakih, Shaikh Ibrahim Sulaiman, Shaikh Ahmed Abdul Jabbar, Shaikh Saleh El-Abbad, Shaikh Ali Alireza, and Dr. Rashid Faroun.

Shaikh Hafiz Wahba is ambassador to England, Prince Abdullah is deputy viceroy of Hedjaz, and Prince Mohammed is amir of Medina.

Prince Faisal, and several others of the party speak English. Shaikh Ali Alireza, who is the personal interpreter for Prince Faisal, is a petroleum engineering student at the University of California and indicated that he might possibly add to his petroleum engineering work by attending Texas A. & M.

The entire group made a good impression on those who came in contact with them.

## *Bush Properties Sold*

Arrangements for the purchase of all the outstanding capital stock of R. R. Bush Oil Company of Long Beach, California, by General Petroleum Corporation, have been announced.

The properties involved in the purchase consist mainly of 30 wells in the Los Angeles basin, most of them in Signal Hill, with a production of approximately 7000 barrels per day.

# Oil Pact, FPC Hearings, Materials Situation on PIWC's May Agenda

Several subjects of outstanding importance to the oil industry generally are expected to come up for consideration at the next meeting of the Petroleum Industry War Council May 16.

Included are the pending Anglo-American agreement, the intangible drilling cost option, the Federal Power Commission and Senate Committee investigations, and the changes in the supply anl materials situation which may develop as a result of the gradually slackening fighting in the European Theatre.

Preceding the meeting the National Oil Policy Committee likely will discuss with PAW and State Department officials the views of the latter on the question of antitrust protection in the oil agreement.

The report of the council's Committee on Petroleum Economics is expected to discuss supply and demand in months to come from the standpoint of an end to the war in Europe and transfer of most military activities to the Pacific. It is generally realized that V-E-day may be postponed until all of Germany is occupied and all resistance ended, but it is expected that the tempo of fighting will drop gradually in that area and build up rapidly in the Far East. The report is expected to show how that change will affect the operations of the oil industry and to make an estimate of the amount of oil products which may become available for civilian consumption at home as a result of the shifting of military operations.

## Ed Pauley Mentioned As Possible Ickes Successor

Suggestions that Ed Pauley, California independent producer, may supplant Ickes as Secretary of the Interior were current in Washington this week, but few observers placed any credence in the report.

The story was that Ickes met Deputy Administrator Ralph Davies through Pauley, who was a mutual friend. Ickes and Pauley reportedly were close until the latter attempted to get government aid to build an aviation gasoline plant in Mexico, which Ickes and Davies supported, but the State Department turned thumbs down on the project and Ickes finally sided with it.

Reportedly the "big" oil interests are seeking to have Pauley put into the driver's seat of interior, which may play an important role in postwar planning.

## Small Business Committee Holds Meet With Wallace

Appointed by Secretary of Commerce Henry A. Wallace, the Small Business Advisory Committee held its first meeting with him last week to discuss suggestions for enabling small business to do its full share in furnishing maximum employment after the war.

Membership of the committee includes W. E. Harbor of the American National Bank, Shawnee, Oklahoma, as representative of the independent oil operators.

Wallace announced that the small business committee was the first of a series of groups he proposes to appoint to advise him concerning ways and means for "developing the fullest use of all manpower, womanpower, money, credit, ingenuity and science to produce even more for the peace than we have learned to produce for war so that the peacetime standard of living may be continually rising."

## Industry Is Urged To Save Scrap Iron

**Consumer inventories of heavy melting scrap have declined so low that steel mills are threatened with having to suspend operations in some localities. At this time inventories comprise mainly the lighter grades of scrap, alloys, etc., so that there is not enough of the heavy grades available to combine with the lighter grades to make proper charges to steel furnaces.**

**A much greater flow of heavy melting scrap is badly needed to balance the furnace charges and prevent shut-downs.**

**The Conservation and Salvage Division of War Production Board is calling upon the petroleum industry, through its executives, salvage managers, storekeepers, and others to resume its salvage activity and make every effort to accelerate the preparation and movement of heavy melting scrap to the mills.**

## PAW May Certifications Call for More Production

Crude production will again be stepped up in May under certifications which PAW was preparing to the end of the week, a feature of which will be an increase of 28,200 barrels daily in California output.

Texas production was scheduled to remain at its current level with a total of 2,332,000 barrels daily of all petroleum liquids, of which 2,170,300 barrels will be crude oil.

The California certification will call for 947,000 barrels of crude and 60,280 barrels of natural gasoline and condensate daily carrying the state above the million-barrel mark for the first time, to 1,007,280 barrels a day.

That the crude production set for California is 23,400 barrels in excess of the maximum efficient rate was admitted by PAW, which explained that while increased quantities of West Texas crude are being moved to California, the continued shortage of transportation facilities makes it necessary to increase the state's production to enable capacity operation of West Coast refineries, not heretofore necessary.

## Texas Allowable for May Set at 2,311,733 Barrels

The Texas Railroad Commission has fixed an allowable of 2,311,733 barrels daily for the month of May, slightly under PAW's requested figure.

Fullerton was cut from 15,957 to 13,889 barrels per day, Talco was reduced from 23,571 to 18,817 barrels daily and Sulphur Bluff was cut from 3918 to 3539 barrels. The latter two reductions were ordered because both Humble and Talco pipe line companies reduced their nominations. A shortage of tank cars was reported and Talco pointed out that because of flood conditions, oil has not moved as rapidly as usual.

The state generally, including East Texas, will produce 25 days during May. The Panhandle will be exempt from shutdowns.

## Right Course Being Sought On Drilling Cost Measure

Definite suggestions for legislation to overcome the effect of the court decision in the F.H.E. case invalidating the option of expensing or capitalizing intangible drilling costs will be perfected in the near future by Judge J. C. Hunter and Russell B. Brown, co-chairmen of the General Depletion Committee, working under instructions of the committee at its meeting in St. Louis April 4.

However, Brown said last week, it is expected some time will be required to obtain agreement as to the type of legislation needed to accomplish the purpose without running into departmental objections and legislative difficulties.

As soon as adequate support of a definite course to be followed is assured, details of the program will be made known to the industry, he said.

## East Coast Deliveries

Present high level of overland transportation must be still further raised to meet continuing increases in military demands and particularly in Navy diesel fuel oil, PAW officials declared last week. Rail movement averaged 539,443 barrels daily, only 1145 barrels below the preceding week, while both pipe lines showed increases.

Aside from flood conditions, now abating, the most serious factor is the withdrawal of tankers from East Coast service. This imposes a heavy load on railroads which are losing cars to the West Coast movement.

# Texas Gas Measure in Better Shape; Legislature Wants to Snuff Flares

The Texas gas conservation bill appeared to be in much better shape last week as full copies of the latest draft became available. Little difference appeared between the versions approved independently the week before by House and Senate committees.

Discussion in the committee meetings indicated such wide difference of opinion among members and such promiscuous recommendation of amendment, that it was difficult to tell how the bills would read. However, sponsors of the measures were evidently more adroit than they appeared, as the final draft contains nothing that was not approved by both committees.

There is a slight difference in language used, but the ideas expressed, at least to the layman, appear identical. If nothing else is done, one important principle of law will be established by the Legislature if the bills pass in their present form. That is, that the Legislature intends that the gas transmission companies shall pick up flare gas wherever possible. Once this principle is established, advocates of this program will have much less difficulty in advancing its progress in succeeding sessions. More restrictions may be added, perhaps one at a time, but the flare gas will gradually disappear into the pipe lines.

### Enactment Doubtful

Whether the bills could be acted upon was still doubtful. Late in the week neither branch had considered them on the floor. Some senators had announced they would oppose the bill, others would offer amendments. The outcome was still in doubt, but opponents felt more confidence as the end of the session approached.

The controversial subsection (m) of Section 3 was revised to clarify its provisions and also to give the Commission broader powers. This section still lists a gas-oil ratio in excess of 2000 to 1 as waste, but now provides that the commission may permit ratios up to 10,000 cubic feet per barrel of oil where conditions warrant, and even in excess of 10,000 to 1 if the gas so produced is used for lawful purposes, excluding flaring and venting.

Section 14, which provides for the commission to allocate gas production among fields on a market demand basis, also was changed.

In connection with the taking of casinghead gas, Section 14 now states such gas will not be considered reasonably accessible to market if gas purchasers must install treating and other facilities not necessary in other nearby fields. This section also provides that the quantity of casinghead gas available to purchasers must be sufficient to make it economically practical for purchasers to make required investments in facilities. Gas shall not be used for gas lift, the section continues, unless the commission finds that such practice will not cause reservoir waste.

The clause providing for voluntary agreements (Section 21) was changed to eliminate the inclusion of marketing of products.

Still in the measure was the provision forbidding the commission to require repressuring, pressure maintenance or cycling operations in fields where yields do not exceed 1½ gallons of pentanes and heavier liquid hydrocarbons per thousand cubic feet of gas. At recent hearings, some operators protested that this would limit commission authority to only 2 or 3 fields in the state.

## *Huge Increase In Naval Oil Needs Seen for 1946*

Expanding operations of the United States Fleet during the coming fiscal year will require 154,358,000 barrels of fuel oil at an average cost of $1.221 per barrel, it was estimated by Rear Admiral W. J. Carter, chief of the Bureau of Supplies and Accounts, testifying before a House appropriations subcommittee on the naval supply bill for 1946.

This will be an increase of 27,860,750 barrels more than the revised estimate for the current year. The fleet is scheduled to total 2121 vessels, an increase of 93, and Carter explained that the disproportionate increase in fuel oil requirements will be due to the fact that many of the vessels delivered this year have been in service only for a brief period and there will be an over-all increase in distances covered and the rate of operations as the war swings into high gear in the Pacific.

The minimum price paid by the Navy for fuel oil, he said, is 95 cents a barrel, picked up at Aruba. About 5,356,000 barrels of oil more than the undisclosed amount provided this year is expected to be obtained under reciprocal lend-lease.

Diesel oil requirements of the Navy were placed at 37,211,000 barrels, an increase of 4,581,000 barrels, and gasoline, other than aviation, will cost $49,463,280, an increase of $16,325,450.

## *Truman's Views on Future Of Rubber Plants Unknown*

President Truman's views on the disposition after the war of government-owned synthetic rubber plants remained undisclosed this week following his refusal to comment on that phase of the postwar situation.

At his first press conference, Truman indicated that he had no immediate changes in view for President Roosevelt's policies, foreign or domestic.

The president said he was in sympathy with legislation pending in Congress to extend the Reciprocal Trade Agreements Act and permit a further cut of 50 percent in already reduced tariff rates and in the import tax on oil.

## *Fewer Than Anticipated Lost in 18-30 Age Draft*

Effect on industry of the new Selective Service program for calling occupationally-deferred registrants in the 18-30 age group will be somewhat less than originally expected, due to the high percentage of rejections on physical grounds.

Selective Service officials are reported as conceding that the number of men actually inducted will be much lower than estimated when orders to take up to 70 percent of men in the affected group were sent to local draft boards a few weeks ago.

With the original 30 percent which essential industries were permitted to retain, the 3000 additional deferments granted oil men and a still additional small number obtained through the Chemical Bureau of the War Production Board, the rejections by medical examiners will leave the oil industry with a larger—but not yet computed—number of employes in the 18-30 group than it originally anticipated.

### Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

| STATE OR DISTRICT | PRODUCTION IN WEEK ENDED April 21 | April 14 |
|---|---|---|
| Alabama | 300 | 250 |
| Arkansas | 80,550 | 80,500 |
| California | 912,450 | 906,500 |
| Colorado | 9,550 | 9,550 |
| Florida | 15 | 15 |
| Illinois | 205,600 | 187,600 |
| Indiana | 11,700 | 12,100 |
| Kansas | 273,150 | 268,150 |
| Kentucky | 22,950 | 16,450 |
| Louisiana | 366,050 | 366,050 |
| North Louisiana | 71,050 | 71,050 |
| South Louisiana | 295,000 | 295,000 |
| Michigan | 53,400 | 47,050 |
| Mississippi | 52,400 | 52,200 |
| Missouri | 100 | 100 |
| Montana | 22,300 | 20,340 |
| Nebraska | 900 | 950 |
| New Mexico | 105,650 | 105,650 |
| New York | 13,200 | 12,750 |
| Ohio | 6,550 | 5,950 |
| Oklahoma | 347,350 | 378,300 |
| Pennsylvania | 37,200 | 36,150 |
| Tennessee | 35 | 35 |
| Texas | 2,170,500 | 2,170,500 |
| Upper Gulf Coast | 565,200 | 565,200 |
| East Texas Field | 378,100 | 378,100 |
| Rest of Eastern Texas | 145,500 | 145,500 |
| Lower Gulf Coast | 249,750 | 249,750 |
| Southwest Texas | 81,400 | 81,400 |
| South Central Texas | 21,000 | 21,000 |
| West Texas | 489,550 | 489,550 |
| North Texas | 150,050 | 150,050 |
| Panhandle | 89,950 | 89,950 |
| West Virginia | 8,700 | 8,300 |
| Wyoming | 106,350 | 105,700 |
| Total United States | 4,806,950 | 4,791,140 |

# Operators Urged to Return OPA Oil Cost Questionnaires by May 1

OPA last week began its study of the debit side of producing operators' ledgers, sending out to a selected group of producers a questionnaire asking for the years from 1936 through 1944, exclusive of 1940, which was on the 1939 level and was dropped so that OPA could get the earlier figures it desires and the industry the later ones, from 1942 to date.

Operators were urged to get their completed reports in by May 1. All information will be held confidential.

Prepared with the cooperation of the National Crude Oil Industry Advisory Committee, the questionnaire carries 50 questions, the first 17 relating to well and engineering data, production and income, and the remainder dealing with production expense, compensation to officers and owners, production assets, accounting practices, and production, development and finding costs.

### Asks Replacement Costs

The expenditures for finding and developing reserves are being compiled at the insistence of the industry committee, which contends that the cost of replacing oil reserves should be considered in reaching a determination as to the adequacy of the present crude-price structure, although OPA has never consented to do so.

The study, together with one on refining costs, is being made in conformity with a recommendation of the House Small Business Committee that OPA get some actual figures on which it could defend or amend its crude price ceilings.

The questionnaire was sent out to a carefully selected list of 600 operators, screened by both OPA and the industry committee to insure that all levels of operation and all geographic divisions of production were represented.

Included in the list were all the major companies, the larger independents, the "war" companies (concerns which had profits from other business with which they have gone into the oil fields), and the small independents.

OPA is setting up a staff of auditors who will investigate any returns in which the figures appear to be out of line, with a view to insuring that the data collected are accurate.

It was explained that OPA was faced with a choice of sending out many thousands of questionnaires and contenting itself with a small percentage returned, as occurred when the Tariff Commission made its investigation a few years ago, or a small number which could be followed up and an almost total return insured. Both OPA and the industry committee felt the latter was preferable, and the committee sent a letter to all operators receiving the questionnaire, emphasizing the importance to the industry of 100 percent cooperation.

Legislation requiring OPA to consider "the necessity for exploring for crude petroleum and the maintenance of a competitive position in the petroleum industry" by pricing crude oil on the basis of the relationship between the index based on its national average price and the index of all commodities in 1926, was introduced in the House of Representatives April 18 by Congressman Lyle H. Boren of Oklahoma.

The Boren bill provides that the ceilings fixed on that basis shall not be less than 80 nor more than 100 percent of parity above the present price ceilings for crude.

### Explains Situation

In its letter to those receiving the questionnaire, the industry committee explained "there is a basic difference of opinion as to the method of determining costs and 'aggregate earnings' to be used in fixing petroleum maximum price ceilings. OPA contends it is limited by law to the use of bookkeeping profit and loss data. This committee believes that replacement costs must be considered and that the law permits it. It has been impossible to reconcile these differences of opinion.

"The questionnaire has been developed so as to furnish both the information desired by OPA and the industry committee."

The committee seeks its information for "use in support of a request or reconsideration for an appeal, should it appear that such data indicate that crude petroleum maximum price ceilings are not 'generally fair and equitable'."

## Unitization Measure Enacted by Oklahoma

The Oklahoma legislature has enacted a unitization measure to enforce compulsory secondary oil recovery operations in depleted and semi-depleted fields where 50 percent or more of the lessees of a common source of supply petition the Oklahoma Corporation Commission to unitize an area.

Thus ends a four-year fight over one of the most controversial pieces of legislation ever considered by Oklahoma lawmakers. The bill will become effective immediately.

A brief fight was made on the bill in the Senate to limit any liability of the state from its one fourth royalty on wells located on capitol grounds. Under the bill's provisions the one eighth royalty commonly retained by the landowner is not liable for any cost operation. It authorizes unitized management, operation and development of a whole or part of any common source of supply of oil and gas. With only a few exceptions Oklahoma operators appeared to favor the legislation.

## Selective Repeal Wartime Measures Asked by CED

A full return to a normal peacetime economy will require a period of some 30 months after the defeat of Japan, the first six months for reconversion and the following two years for gradual return to normalcy, it was estimated April 19 by the Committee for Economic Development.

A program for the removal of wartime controls has been developed by the research committee of the CED, calling for selective rather than indiscriminate repeal of wartime measures.

"For some controls," it was explained, "the emergency may end largely with victory in Europe, for others, with victory over Japan; for others, especially anti-inflation measures, it may extend for a considerable period thereafter."

The oil industry would benefit materially by adoption of the committee's recommendation that in the field of price control general advances should be resisted but prompt adjustment should be permitted prices which deter production because they do not bear a reasonable relation to cost at normal levels of production, with the objective of "a level of prices high enough to induce the required expansion of production and employment, and low enough to maintain the necessary consumption under normal conditions of supply and demand."

Continuation of import and export controls until high production has relieved the domestic shortage of civilian goods was urged, with the volume and type of exports gauged carefully in relation to domestic supplies to prevent their becoming a serious factor in promoting price inflation."

The proper timing of action will be the most important factor in the transition from war to peace, however, it was asserted. Too abrupt removal of controls will raise dangerous situations, but other and equally dangerous conditions may result if they are retained too long.

## Oil Accidents Increase In Severity During 1944

An increase in the severity rate of accidents in the petroleum industry for 1944, is reported by the Department of Accident Prevention of the American Petroleum Institute. Longer working hours per man combined with wartime shortages of materials were responsible for the increase.

With all elements of the industry working at top speed to produce the record-breaking output of the petroleum products needed to fight two great wars, the increase in accidents was not unexpected, the annual report of the department said.

Principal increases in the frequency and severity of accidents occurred in the drilling, production, refining, and natural-gasoline branches of the industry. These were compensated for in part by decreases in other activities, but the net shows an increase for the industry as a whole.

*Quality*

# UNDER THE MAGNIFYING GLASS . . .

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- Individual Valve Chambers
- Deep Stuffing Boxes
- No Overlapping of Piston Rods
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- Flood Lubrication
- Large Roller Bearings
- Alloy Steel Cranks Set at 90° Angle
- Alloy Steel Lapped Herringbone Gears

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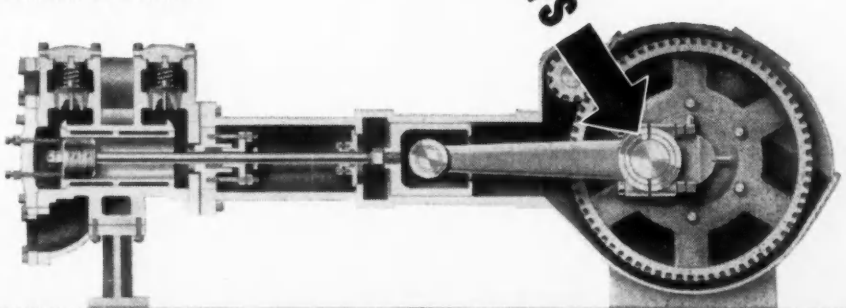
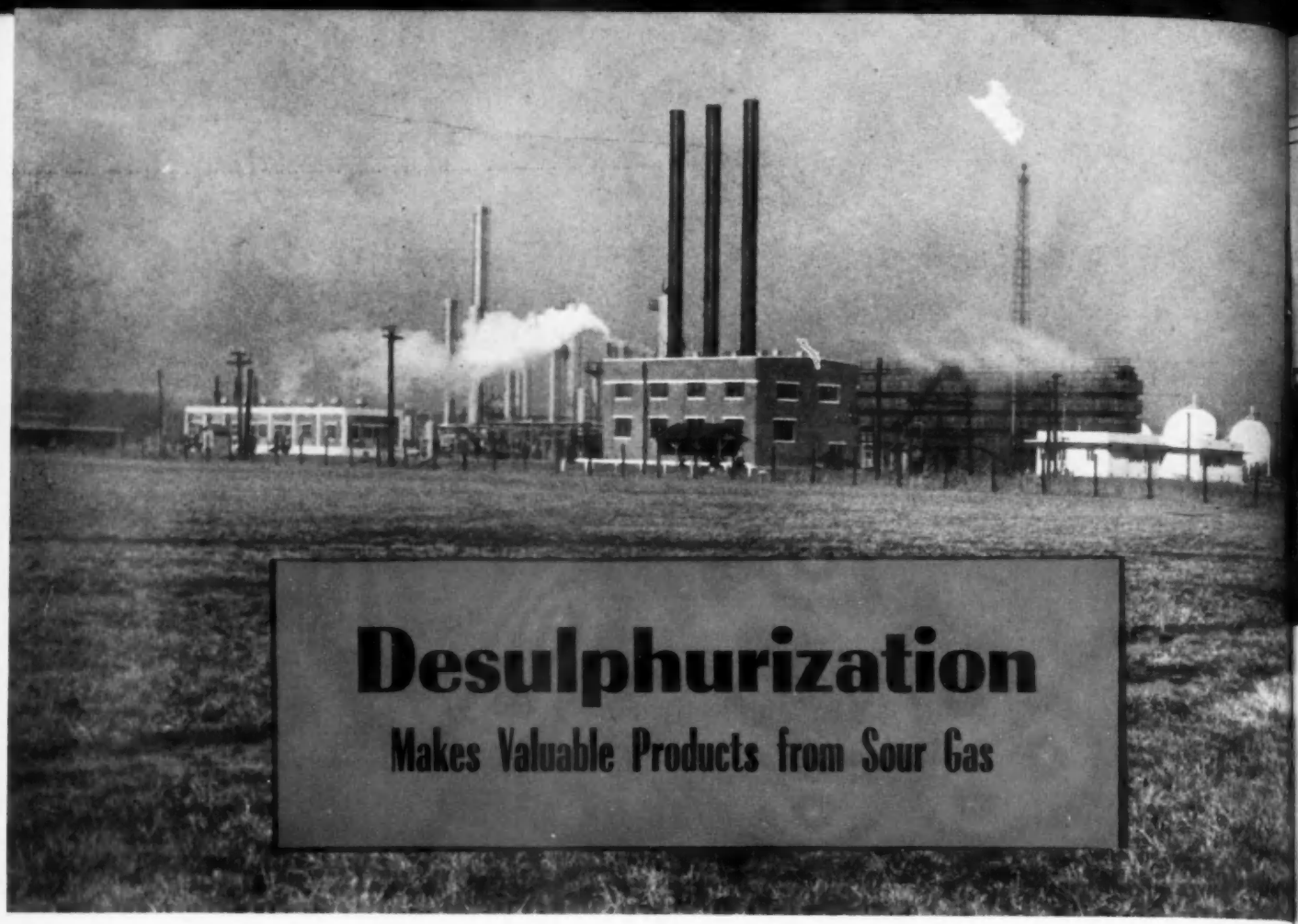
No unit of mechanical equipment is stronger than its weakest part, and in too many cases the weakness of design lies in the bearings. That is why GASO engineers have paid so much attention to the bearings of GASO Pumps. The shell bearings are lined with babbitt and for positive safety designed to carry loads far beyond the maximum requirements of pumping service. A detail? Yes—but it's details that make for perfection, and it's the approach to perfection that is sought by the buyers of pumps for civilian as well as army use. GASO occupies an enviable spot in the preferences of both types of purchaser . . . Gaso Pump & Burner Mfg. Co., 902 East First Street, Tulsa, Oklahoma. Export Office: 149 Broadway, New York. Shreveport: W. L. Somner Co., 419 Lake Street. Los Angeles: Production Equipment Co., 651-653 E. Gage Ave.



# GASO PUMPS

*for every oil industry need*



# Desulphurization

## Makes Valuable Products from Sour Gas

Desulphurization and gasoline extraction plant of the McKamie Gas Cleaning Company

By H. B. KNISELEY
The Carter Oil Company

AMONG interesting and unusual operations in the Mid-Continent area are gas desulphurization or purification plants in Southwest Arkansas. These are converting useless sour gas into such valuable products as condensate, gasoline, sulphur, and sweet dry gas for industrial and domestic purposes. Their success in solving the problem of how to utilize the vast amount of sour gas developed in Southwest Arkansas is of particular significance at this time because of wide interest in conservation and proper utilization of gas resources. These plants have not only checked waste of gas, but by converting it into highly essential commodities have allowed the producing fields to be developed. In turn, the development of an adequate fuel source has speeded the industrial development of the area.

### Plants Successful

Previous articles have discussed the economics and technical processes of such work. ("Utilization of Sour Natural Gas Reserves," by Alec M. Crowell, THE OIL WEEKLY, September 21, 1942, and "Arkansas Sour Gas Now Being Converted Into Useful Product," THE OIL WEEKLY, July 19, 1943). However, practically nothing has been published on the operation of these plants after they have been in operation over a period of time. A description of the results in the McKamie field, which is of special interest because the plant operates on gas involving unusually high hydrogen sulphide content, will forcefully illustrate the practical success of these purification plants.

The McKamie gas field, discovered in June, 1940, has one of the highest condensate contents known. In view of the value of condensate, operators started an active development campaign and completed several gas-condensate wells. Their primary motive was the recovery of the condensate. Gas produced in the field has a high content of hydrogen sulphide, estimated at approximately 4300 grains or .6 pounds per 100 cubic feet. Because of its high sulphur content general use of this sour gas was prohibitive and almost unmarketable. As a result, in the early days of the field the residue gas was burned in flares after the condensate had been recovered. Literally thousands of barrels of valuable petroleum by-products were being vented into the air in addition to large quantities of sulphur needed in the military and civilian effort.

This obvious waste of a valuable resource resulted in considerable criticism, and on March 1, 1943, after producing 1,746,000 barrels of condensate and more than 13 billion cubic feet of gas, the McKamie field was shut in until facilities could be installed to conserve and utilize the residue gas which was being flared and wasted.

As a result, two companies worked out plans to commercialize the extractable products from the residual sour gas after it had been stripped of its condensate. The McKamie Gas Cleaning Company, an Arkansas corporation owned jointly by the Standard Oil Company (New Jersey) and The Atlantic Refining Company, erected a desulphurization and gasoline extraction plant designed to "sweeten" the sour gas and recover liquefied gas products. The Southern Acid and Sulphur Company constructed a sulphur plant which receives the McKamie plant's "cast off" hydrogen sulphide and converts it into pure sulphur.

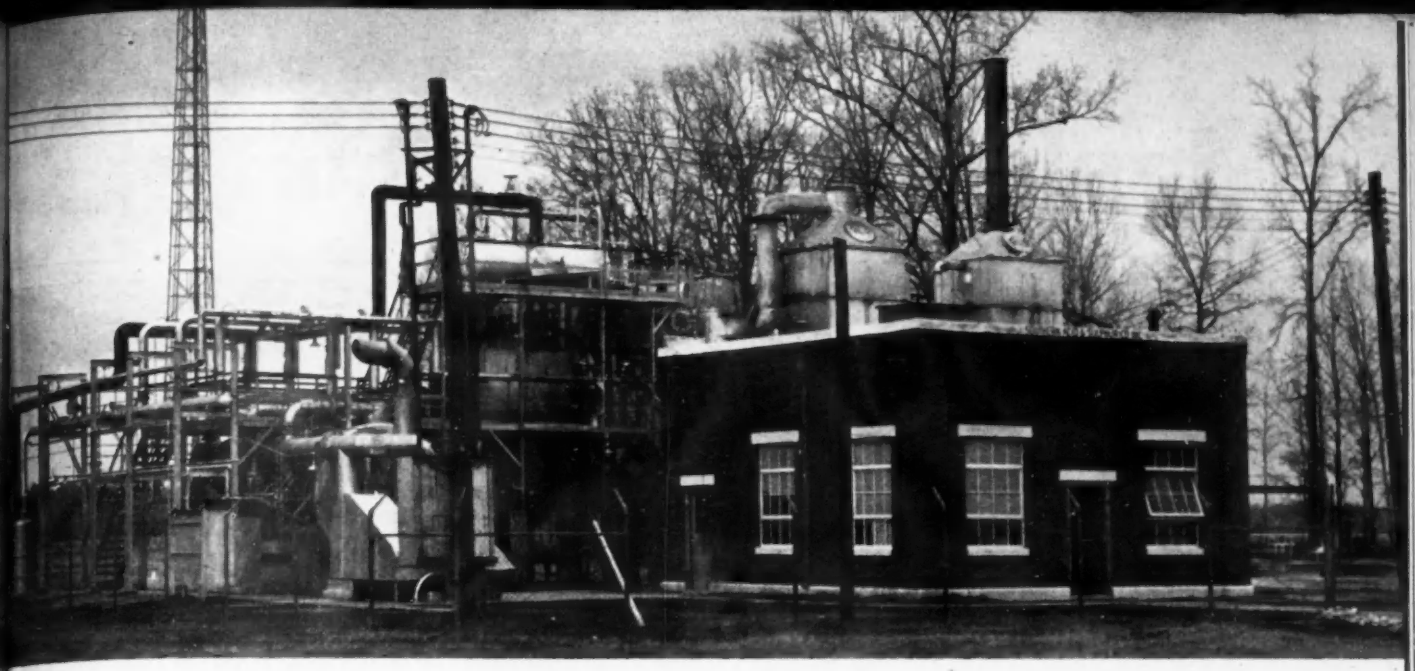
### Unusual Operations

Following completion of these plants in October, 1943, the McKamie field activities have been developed, through the concerted efforts of several operating companies, into one of the most unusual series of integrated operations to be found in any single field.

Natural gas in the McKamie field is produced in the conventional manner under complete control, flowed into separators and regulated according to production allowables. Since three-stage separation of the gas from the condensate is employed, three gathering systems are required in the field, one a high-pressure system, one an intermediate, and the third a low-pressure system.

In the primary separation stage the gas flows from the well into a high-pressure separator where a portion of the liquid hydrocarbons are recovered through condensation. The condensate is run into stock tanks where it is gathered by the Interstate Oil Pipe Line Company for delivery to refineries.

Following the first separation stage the gas remaining in the separators is carried into an intermediate pressure separator where additional liquid hydrocar-



**Southern Acid & Sulphur Company's plant in the McKamie field. Here hydrogen sulphide "cast off" by the McKamie Gas Cleaning Company's desulphurization unit is processed into molten sulphur.**

bons are recovered, run into stock tanks and the residual gas run to a third separator where the remaining hydrocarbons are condensed out. The remaining gas is then delivered to the McKamie Gas Cleaning Company's desulphurization plant.

### Residue Sold

In the desulphurization plant the McKamie company "sweetens" the gas by removing the hydrogen sulphide and carbon dioxide after which the sweetened gas is passed into the gasoline plant. There, gasoline and butane are extracted and delivered to the commercial market. Methane and ethane also are produced in the processing and used for plant fuel. The residue "sweet" gas is sold to distributors and passed along for home and industrial consumption.

The highly concentrated hydrogen sulphide gas removed in the desulphurization process is piped to the Southern Acid and Sulphur Company's nearby plant where it is converted into molten sulphur. This flows into large bins and solidifies into blocks of pure sulphur. These blocks, about 25 feet high, 75 feet long and 50 feet wide, are later broken unto chunks by dynamite blasts and loaded into railroad cars for shipment.

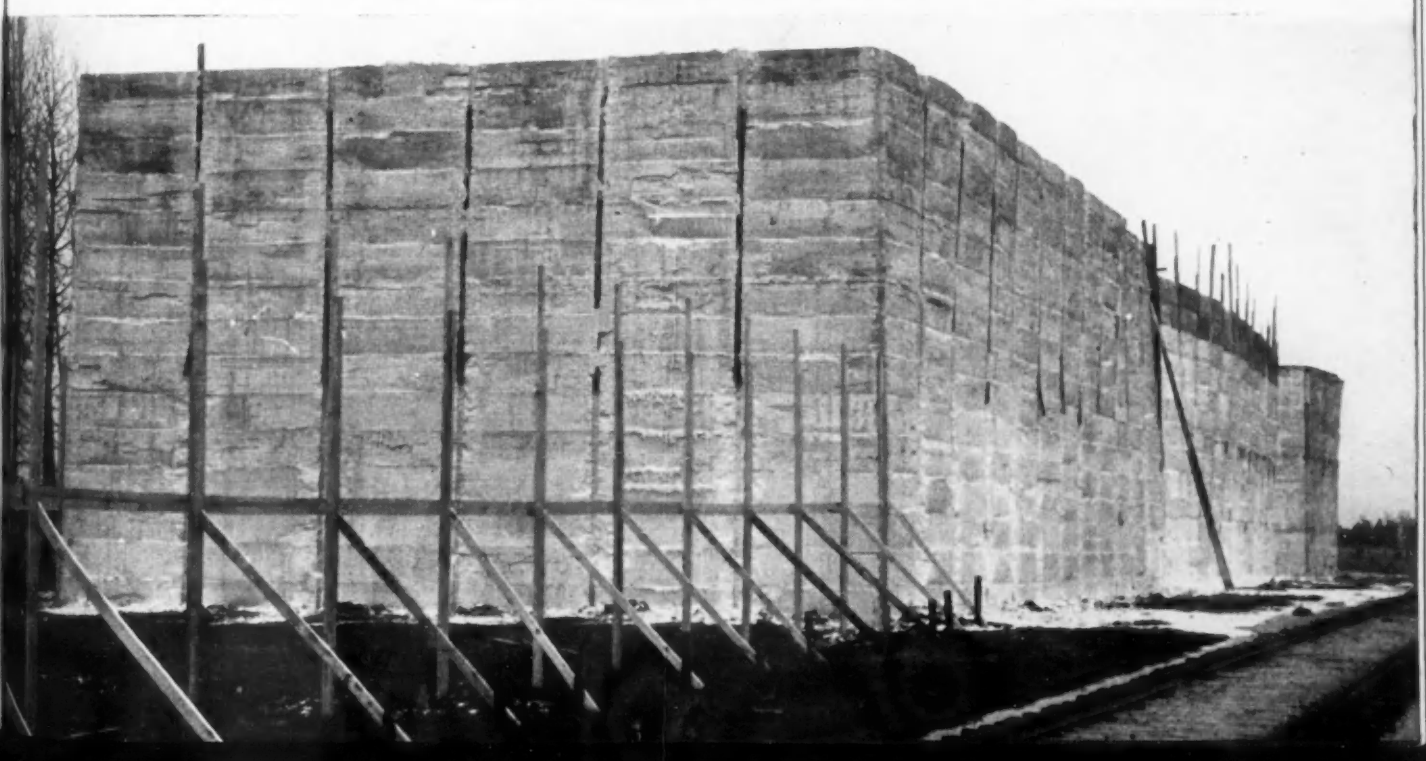
In January of this year the 19 gas-distillate wells in the McKamie field produced daily an average of 3040 barrels of condensate and 25 million cubic feet of gas.

After processing the gas the McKamie desulphurization and gasoline plant recovered an average of 30,000 gallons of liquefied gas products, including 18-pound gasoline, natural butane and iso-butane, in addition to 22 million cubic feet of sweetened residue gas which was used for domestic and industrial purposes. During January the Southern Acid and Sulphur Company received 59,211,000 cubic feet of highly concentrated hydrogen sulphide gas which it converted into about 60 tons of sulphur.

The sweetened gas, in addition to supplying fuel for homes and business firms, has played an important role in war industries in Arkansas. The McKamie company sells this fuel to the Arkansas Power and Light Company and the Arkansas and Louisiana Gas Company, both of which serve many war plants.

Located in the southwestern corner of Arkansas the McKamie field is on 160-acre spacing and each well has a daily allowable of 160 barrels of condensate. The productive limits of the field have been rather well defined on the north, south and east by dry holes; but there is a possibility of expansion westward. It is estimated that there are from 3200 to 3500 productive acres above the generally accepted 9060 feet sub-sea water table.

**Molten sulphur is piped to huge bins, where it solidifies and forms solid blocks of pure sulphur, 25 feet high, 75 feet long and 50 feet wide. Dynamite is used later to blast out chunks for loading into railroad cars. Framework for a fourth bin is started at left.**



# Exploration Falls Short of PAW Program

Data compiled by District Editors and coordinated
By L. J. LOGAN, Associate Editor

EXPLORATORY drilling has continued to fall short of volumes considered essential by the Petroleum Administration for War, despite the fact that total drilling this year is almost exactly fulfilling the PAW program.

In March there was a decrease in exploratory completions, which averaged 71 per week, against 78 weekly in February and 79 per week for the first three months of 1945. PAW called for 5000 exploratory wells this year, but the March completions were on the basis of about 3700 per year, and those for the first three months were on the basis of about 4100 annually. With the first quarter of the year showing this deficiency, there would have to be a sharp stepping up of exploratory activity in the remaining months to reach the goal, and in present circumstances it appears highly doubtful that the 5000 tests will be completed.

It is significant that the failure to drill as many wildcats as desirable is not explainable by any extraordinarily high ratio of unsuccessful tests among those drilled this year. Evidently the deficient volume of wildcatting is caused rather by other factors, including general lack of incentive for risk-taking and the relatively high present costs of exploration. In the wildcatting which is being undertaken the ratio of success is, in fact, better than last year, although the successful results apparently are still not sufficiently attractive under existing conditions to draw forth the vigorous exploration considered essential. Total productive tests completed in the first three months of 1945 were 25 percent above those in the like months last year, although all exploratory completions showed a corresponding increase of only 16 percent. Conversely, the increase in unsuccessful exploratory completions rose only 14 percent, against the 25 percent gain in productive tests. In the first three months of 1945, 19 percent of all exploratory completions were successful against 17.6 percent in the like months of 1944, while the proportion of dry holes was cut to 81 percent this year from 82.4 percent in the first quarter of last year.

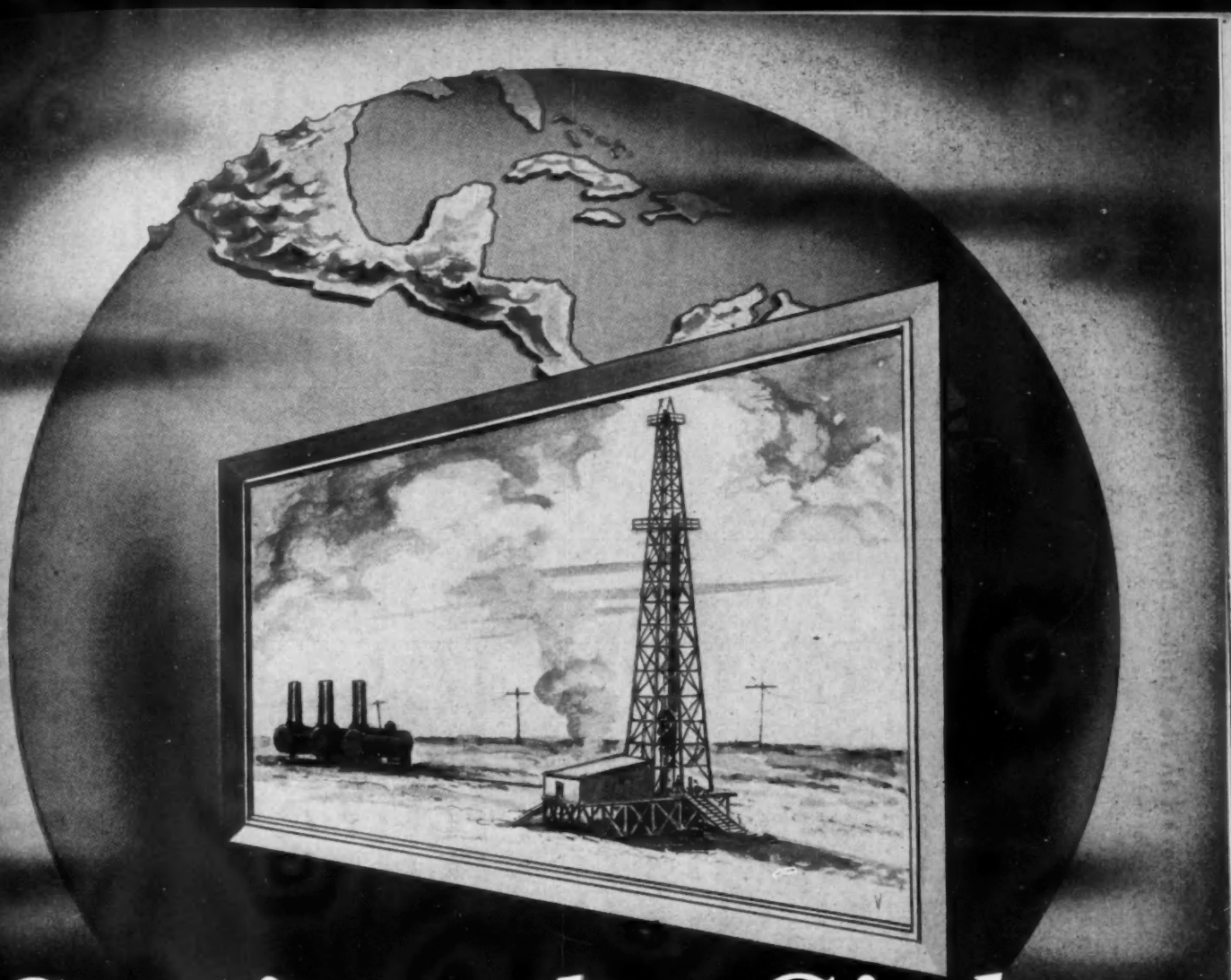
Another significant trend indicated by statistics is that toward increased proportion of drilling in wholly unproved areas and decreasing reliance on existing fields for new pay zones and extensions of existing pays. The established fields evidently have been developed appreciably toward fully-explored status, and it has become increasingly more necessary to go out into unprospected areas to find new reserves. So far, this resorting to new prospects has been quite successful, as pointed out above. But this fact is not necessarily encouraging from the long-range standpoint. For many of the prospects now being explored for the first time are back-log prospects available

■ CONTINUED ON PAGE 60

Also see tables on pages 54-55-56

## Results of Exploratory Drilling in March and First 3 Months, 1945-1944, By Districts

| State or District | MARCH, 1945 | | | | | | | | | | | | | FIRST THREE MONTHS, 1945 | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Productive Tests | | | | | | | | | Unproductive Tests | | | Total Exploratory Tests | Productive Tests | | | | | | | | Total Productive | Unproductive Tests | | | Total Dry | | Total Exploratory Tests | |
| | New Fields | | | New Pays | | | Extensions | | | Total Productive | | | | | | | | | | | | | | | | | | | | |
| | Oil | Gas | Dis. | Oil | Gas | Dis. | Oil | Gas | Dis. | | Wildcats | New Pays | Outposts | | Oil | Gas | Dis. | Oil | Gas | Dis. | Oil | Gas | Dis. | 3 Mo. 1945 | 3 Mo. 1944 | Wildcats | New Pays | Outposts | 3 Mo. 1945 | 3 Mo. 1944 | 3 Mo. 1945 | 3 Mo. 1944 |
| Alabama | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | 1 | 4 | | | 4 | 1 | 4 | 2 |
| Arizona | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 2 |
| Arkansas | | | | | | | | | | | 2 | 1 | | 3 | | | | | | | | | | | 2 | 10 | 1 | 1 | 12 | 8 | 12 | 10 |
| California | 1 | | | | | | | | | 1 | 26 | | | 27 | 1 | | | | | | | | | 1 | 11 | 64 | | | 64 | 48 | 65 | 59 |
| Colorado | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | 2 | 2 | 2 | 3 |
| Florida | | | | | | | | | | | 3 | | | 3 | | | | | | | | | | | | 4 | | | 4 | | 4 | |
| Georgia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 2 | 1 | 2 | 1 |
| Illinois | 5 | | | 1 | | | 3 | | | 9 | 17 | | | 26 | 6 | | | 4 | | | 12 | | | 22 | 20 | 67 | | | 67 | 74 | 89 | 94 |
| Indiana | | | | | | | | | | | 10 | | | 10 | 1 | | | | | | | | | 1 | 3 | 34 | | | 34 | 11 | 35 | 14 |
| Iowa | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | 2 | 1 | 2 |
| Kansas | 4 | 1 | | | | | | | | 5 | 13 | | | 18 | 15 | 3 | | 1 | | | 3 | | | 22 | 17 | 78 | | | 78 | 106 | 100 | 123 |
| Kentucky | | | | | | | 1 | | | 1 | 4 | | | 5 | 1 | | | | | | 1 | | | 2 | 6 | 29 | | | 29 | 24 | 31 | 30 |
| Louisiana | 5 | 1 | | 1 | | 1 | | | | 8 | 10 | | | 18 | 8 | 2 | | 7 | | 3 | 3 | | | 23 | 10 | 36 | | 1 | 37 | 27 | 60 | 37 |
| North Louisiana | 1 | 1 | | | | | | | | 2 | 3 | | | 5 | 1 | 2 | | | | | 2 | | | 5 | 3 | 22 | | | 22 | 18 | 27 | 21 |
| South Louisiana | 4 | | | 1 | | 1 | | | | 6 | 7 | | | 13 | 7 | | | 7 | | 3 | 1 | | | 18 | 7 | 14 | | 1 | 15 | 9 | 33 | 16 |
| Michigan | 2 | | | 1 | | | | | | 3 | 11 | | 1 | 15 | 3 | | | 1 | | | 1 | | | 5 | 4 | 48 | | 2 | 50 | 49 | 55 | 53 |
| Mississippi | | 1 | 1 | | | | 1 | | | 3 | 11 | | | 14 | | 1 | 2 | | | | 1 | | | 4 | 1 | 33 | | | 33 | 15 | 37 | 16 |
| Missouri | | | | | | | 1 | | | 1 | 2 | | | 3 | | | | | | | 1 | | | 1 | | 7 | | | 7 | | 8 | |
| Montana | | | | | | | 1 | | | 1 | 1 | | | 2 | | | | | | | 1 | | | 1 | 1 | 2 | | | 2 | 3 | 3 | 4 |
| Nebraska | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | 2 | | | 2 | 2 | 2 | 2 |
| New Mexico | | | | | | | | | | | 2 | | | 2 | 1 | | | | | | | | | 1 | | 17 | | | 17 | 14 | 18 | 14 |
| Ohio | | 3 | | | | | | 1 | | 4 | 3 | | | 7 | | 6 | | | 1 | | | 2 | | 9 | 8 | 15 | | | 15 | 14 | 24 | 22 |
| Oklahoma | 1 | 2 | | | | 1 | | | | 4 | 25 | | | 29 | 16 | 2 | | 2 | 2 | | 3 | 1 | | 26 | 11 | 69 | | | 69 | 39 | 95 | 50 |
| Texas | 20 | 3 | 4 | 4 | | | 1 | | 1 | 33 | 65 | 1 | 1 | 100 | 40 | 12 | 8 | 17 | 1 | | 4 | | 1 | 83 | 63 | 273 | 10 | 9 | 292 | 280 | 375 | 343 |
| E. Texas Border | | | | | | | | | | | 2 | | | 2 | | | | | | | | | | | 1 | 6 | | | 6 | 2 | 6 | 3 |
| Rest of E. Texas | | | | | | | | | | | 3 | 1 | | 4 | 2 | 1 | | | | | | | | 3 | 5 | 13 | 1 | 2 | 16 | 33 | 19 | 38 |
| North Texas | 1 | | | 1 | | | | | | 2 | 17 | | | 19 | 6 | | | 6 | 1 | | | | | 13 | 10 | 62 | 2 | 1 | 65 | 62 | 78 | 72 |
| West Central | 2 | 1 | | | | | | | | 3 | 7 | | | 10 | 4 | 2 | | | | | | | | 6 | 6 | 22 | 2 | | 24 | 28 | 30 | 34 |
| West Texas | 6 | | | 2 | | | | | | 8 | 10 | | 1 | 19 | 9 | | | 4 | | | 2 | | | 15 | 9 | 56 | 3 | 4 | 63 | 37 | 78 | 46 |
| Panhandle | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 3 | 2 | 3 | 2 |
| Upper Gulf Coast | 2 | | 1 | 1 | | | 1 | | | 5 | 6 | | | 11 | 4 | 3 | 2 | 7 | | | 2 | | | 18 | 5 | 24 | 2 | 2 | 28 | 30 | 46 | 35 |
| Lower Gulf Coast | 7 | 2 | 3 | | | | | | 1 | 13 | 14 | | | 27 | 10 | 5 | 5 | | | | | | 1 | 21 | 22 | 52 | | | 52 | 39 | 73 | 61 |
| Southwest Texas | 1 | | | | | | | | | 1 | 4 | | | 5 | 4 | 1 | 1 | | | | | | | 6 | 5 | 29 | | | 29 | 34 | 35 | 39 |
| South Central | 1 | | | | | | | | | 1 | 2 | | | 3 | 1 | | | | | | | | | 1 | | 6 | | | 6 | 13 | 7 | 13 |
| West Virginia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 |
| Wyoming | | | | | | | | | | | 1 | | | 1 | 2 | | | | | | | | | 2 | 3 | 6 | | 1 | 7 | 4 | 9 | 7 |
| Total U. S. | 38 | 11 | 5 | 7 | 1 | 1 | 8 | 1 | 1 | 73 | 208 | 2 | 2 | 285 | 94 | 26 | 10 | 32 | 4 | 3 | 30 | 3 | 1 | 203 | 162 | 803 | 11 | 14 | 828 | 727 | 1031 | 889 |



# Setting the Sights

## FOR A SUCCESSFUL DRILLING PROGRAM

On the accuracy of the information with which acreage is approved or condemned for oil prospecting, depends the measure of success that will accompany any drilling program. General's highly trained men realize this responsibility of their work, and it is reflected in the thoroughness they apply to the accumulation of sub-surface data and its accurate interpretation.

General's skill and experience, constantly improved equipment and advanced techniques will "set the sights for many successful drilling programs."

General

GEOPHYSICAL COMPANY

HOUSTON

# New Oil and Gas Fields and New Pay Horizons Discovered in the United States in March, 1945

## Also Important Extensions to Established Fields

| COUNTY | FIELD | COMPANY, WELL AND LOCATION | Date Spudded | Date Completed | Total Depth (Feet) | Completion Horizon (Feet) | [1]Name, Character and Age of Producing Formation | [2]Initial Production Method and Choke | Gravity of Oil | [3]Structure: [4]Method of Discovery | Tentative Evaluation of Discovery or Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion). |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **CALIFORNIA—New Gas Field** | | | | | | | | | |
| Solano | N. Rio Vista | Standard's Calpak 2, 6-4n-3e | ..... | 3- -45 | 4840 | 4760- 4810 | Midland sd; Eoc. | F 14 mln. | .... | ..... | Located 4 mi n Rio Vista gas fld, nearest prod. Probably prove of major importance, as disc well was prod fr only 10 ft perforations. |
| | | **ILLINOIS—New Oil Fields** | | | | | | | | | |
| Clay | Passport | Magnolia's F. Stanley 1, sw sw ne, 12-4n-8e | 2- 8-45 | 3-13-45 | 3005 | 3003- 3005 | Rosiclare li; L. Miss | F 326 | .... | ..... | 1¼ mi e abnd Ingraham pool. |
| Edwards | S. Maple Grove | Aetna Oil-R. S. Hayes' C, Greathouse 1, sw ne nw, 23-1n-10e | 1-28-45 | 3-20-45 | 3320 | 3247- 3268 | Lower O'Hara li; L Miss | P 80 | .... | ..... | 2½ mi se Maple Grove pool. Ne offset dry. |
| White | Bend | Bell Bros.' E. H. Morris 1, nw sw nw, 21-5s-14w | ..... | 2- 4-41 | 2373 | 2348- | Tar Springs sd; U. Miss | P 116 | .... | ..... | 1½ mi n New Harmony South pool; previously considered an extension to that pool. No other well in pool. |
| White | Brownsville | H. H. Weinert's Kisner 1, sw ne se, 31-5s-9e | 2- 1-45 | 3-13-45 | 3186 | 3120- 3138<br>3140- 3186 | Rosiclare li; L. Miss<br>McClosky li; | P 187 | .... | ..... | 2 mi n Stokes pool; 2¾ mi s Trumbull pool disc in December. |
| White | E. Concord | Magnolia's H. Pearce 1, ne nw sw, 35-6s-10e | ..... | 6-16-42 | 3028 | 2878- 2896 | Levias li; L. Miss | P 90 | .... | ..... | 1⅝ mi sw S. Maunie pool; 1⅝ mi e Concord pool. Previously included in S. Maunie pool. No other well in pool. |
| | | **ILLINOIS—New Oil Pay** | | | | | | | | | |
| Franklin | Benton | Adkins' Orient Coal 1, ne sw se, 24-6s-2e | ..... | 3-13-45 | 3045 | 1700- 1708 | Kinkaid sd; U. Miss | P 40; 5 wtr | .... | ..... | Old well previously prod fr Tar Springs; now prod fr Kinkaid and Tar Springs sds. Orig comp 1-21-41 as disc well of Benton pool. |
| | | **ILLINOIS—Oil Field Extensions** | | | | | | | | | |
| Edwards | Bennington | Hassie Hunt's E. Weber 1, nw nw sw, 8-1n-10e | 2- 8-45 | 3-13-45 | 3310 | 3268- 3274 | McClosky li; L. Miss | P & F 220; 83 wtr | .... | ..... | ½ mi e extension. Approx 1 mi fr westernmost prod in Maple Grove pool. |
| Richland | W. Parkersburg | F. D. Wicker's Bradley 1, se se sw, 25-2n-10e | 12-15-44 | 3-13-45 | 3305 | 3221- 3240 | Levias li; L. Miss | P 5; 5 wtr | .... | ..... | Previous prod fr McClosky. This well dry in McClosky and plugged back. Extends pool almost 1 mi e. |
| Wayne | Clay City Cons | Pure Oil's L. K. Secrest 1, ne ne nw, 21-1n-8e | 2-24-45 | 3-27-45 | 3141 | 3085- | McClosky li; L. Miss | P 34 | .... | ..... | Almost 1 mi extension to pool. |
| | | **KANSAS—New Oil Fields** | | | | | | | | | |
| Ellis | Unnamed | Darby & Bothwell, Inc.'s Richards 1, se se sw, 6-11s-18w, 1 mi nw Richards pool. | ..... | 3-30-45 | 3610 | 3378- 3385 | Lansing li; Penn | F 125 | 38 | Ant fld; seis sub | Fairly important strike; good porosity, saturation and gas pressure; may cover 640 acs. |
| Graham | Luck | Helmerich & Payne, Inc.'s Luck 1, ne ne, 13-8s-22w, 2½ mi ne Hill City | ..... | 3- 2-45 | 3610 | 3414- 3438 | Kansas City li; Penn | P 328 | 36 | Ant; seis sub | Fairly important disc; prod formation has good porosity and saturation with estimated recovery abt 7000 bbls to the ac; area likely cover 320 to 400 ac. |
| Stafford | N.W. Drach | W. P. Faulkner's Haulman 1, ne nw ne, 11-22s-13w, 1 mi n and w of Drach pool. | ..... | 3-20-45 | 3757 | 3739- 3757 | Arbuckle li; Cam | P 16; 8 wtr | 36 | Str trp; dr | Extends pool abt 1 mi nw with Arbuckle li checking abt 8 ft higher than Drach pool; due to sml prod, strike considered unimportant. |
| Sumner | Unnamed | El Dorado Ref. Co.'s Patterson 1, sec 23-33s-2e, 1 mi w Rainbow Bend Pool | ..... | 3-29-45 | 3280 | 3268- 3280 | Bartlesville sd; Penn | P 50 | .... | Ant; seis sub | Fairly good strike; may cover 640 acs; Bartlesville sd prolific prod. |
| | | **KANSAS—New Gas Field** | | | | | | | | | |
| Barber | Unnamed | Lion Oil Ref. Co.'s Allen 1, nw ne ne, 2-30s-14w, 5 mi s Coats | ..... | 3-10-45 | 4537 | 4515- 4517 | Arbuckle li; Cam | F 6 mln | .... | Str trp; dr | Disc following nw trend and is abt 6 mi nw Lion's Lemon 1, sec 28-30s-13w, gas prod fr Viola li. |
| | | **KENTUCKY—Oil Field Extension** | | | | | | | | | |
| Daviess | Utica | Keith Tank Co.'s Mahan 1, 14-N-29, ¼ mi nw Utica pool | ..... | 3- -45 | 1720 | 1708- 1720 | McClosky li; Miss | P 75 | .... | ..... | ..... |
| | | **NORTH LOUISIANA—New Oil Field** | | | | | | | | | |
| Caddo | ..... | Phillips' Moneyham 1, c ne nw, 5-18n-16w | 10-29-44 | 2-28-45 | 6512 | 5855- 5860 | Travis Peak sd; Trinity | F 80; 4/64" | 42.5 | ..... | Single-well reserve estimated between 100,000 and 125,000 bbls. |
| | | **NORTH LOUISIANA—New Gas Field** | | | | | | | | | |
| Franklin | ..... | American Liberty Oil Co.'s J. B. Kny 1, nw nw, 12-16n-8e | 2-19-45 | 2-15-45 | 3772 | 3557- 3567 | Paluxy sd; L. Cre | F 3 mln; ¼" | .... | ..... | Single-well reserve estimated at 2,400,000,000 cu ft dry gas. |
| | | **SOUTH LOUISIANA—New Oil Fields** | | | | | | | | | |
| Assumption | N.W.-Flank Napoleonville | Shell's Dugas-LeBlanc 1-A, 940 s 00° 30 mins w 640 s 88° 59 min w fr nec, 40-12s-13e. | 2- 9-45 | 3-28-45 | 7405 | 6858- 6893 | Miocene sd; Mio | F 212; 1/8" | 39.7 | ..... | Single-well reserve estimated at 1,120,000 bbls. |
| Beauregard | Oretta | Magnolia's Musser-Davis Lbr. Co. 1, 660 s&e of nwc, 33-6s-11w | 12-19-44 | 3- 9-45 | 9103 | 8708- 8720 | Cockfield sd; Eoc | F 174; 1/8" | 49.7 | ..... | Single-well reserve estimated between 100,000 and 125,000 bbls. |
| Jeff Davis | S. Elton | Stanolind's W. H. Tupper 1, 1320 n 2640 w of sec 29-7s-3w | 12- 5-44 | 3- -45 | 9255 | 8064- 8085 | Frio sd; Olig | F 237, 0.2% wtr; 4/64" | 38 | ..... | Single-well reserve estimated between 675,000 to 700,000 bbls. |
| Jefferson | ..... | California Co.'s E. P. Brady et al 1, start USCGS Station "Perot" go n 80° 56 mins e 6233 to len 2-15s-23e. | 9-25-44 | 3-16-45 | 11035 | 9897- 9907 | Miocene sd; Mio | F 258; 1/8" | 36.2 | ..... | Single-well reserve estimated between 325,000 to 365,000 bbls. |
| | | **SOUTH LOUISIANA—New Oil Pay** | | | | | | | | | |
| Plaquemines | Potash | Humble's Orleans Levee Board 1-B, start m/nly/cor sec 14 go swly alg nwl 1850 th sely at ra 100 to len in 14-18s-15e. | 11-27-44 | 3-21-45 | 10910 | 10869-10879 | Miocene sd; Mio | F 267.78, 0.1% wtr; 4/64" | 31.7 | ..... | Single-well reserve estimated between 320,000 to 360,000 bbls. |
| | | **SOUTH LOUISIANA—New Distillate Pay** | | | | | | | | | |
| Jeff Davis | W. Tepetate | Barnsdall Oil Co.'s Jos. Fuselier 3, 38-7s-3w, 1416.6 fr Well No. 2 on same lse, n offset to Miller 1, disc well. | ..... | 3- 6-45 | 9312 | 9272- 9278 | Frio sd; Olig | F 97.56; 1/8" | 52.46 | ..... | Single-well reserve estimated at 55,000 bbls, 720,000,000 cu ft gas. |
| | | **MICHIGAN—New Oil Field** | | | | | | | | | |
| Huron | Dwight | C. W. Teater's Ignash 1, se se se, 21-18n-13e, 5 mi s Port Austin | 12- 5-44 | 3-21-45 | 2878 | 2865- 2878 | Monroe li & dolo; Dev | S & F 15 | .... | ..... | ..... |
| Osceola | N. Cedar | Sun's State B1, s½ nw ne, 10-18n-9w, 3 mi n Cedar fld | 11-28-44 | 4- 6-45 | 4067 | 3944- 3950 | Dundee li; Dev | P 18 | .... | ..... | ..... |
| | | **MICHIGAN—New Oil Pay** | | | | | | | | | |
| Mecosta | Fork | Sun Oil Co.'s Denslow 1, s½ se ne, 2-16n-8w | 10- 3-44 | 3-16-45 | 5198 | 5001- 5017 | Richfield dolo; Dev | F 48, 1 mln | 54.8 | Ant | ..... |
| | | **MISSISSIPPI—New Gas Field** | | | | | | | | | |
| Jasper | Soso | Gulf's Edwards-Bailey 1, 27-10n-13w, 9 mi nw Laurel | 11-14-44 | 3- 2-45 | 8153 | 6586- 6696 | Christmas sd; Eutaw | F 64.8, 2.064 mln 4/64" | 67 | SD; seis | Indicates develop of huge new gas-condensate fld. Lies within triangle of 3 domes—Stringer, Soso, and New Home. Very fast development indicated. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jasper | Soso | Gulf's Edwards-Bailey 1, 27-10n-13w, 9 mi nw Laurel | 11-14-44 | 3- 2-45 | 8153 | 6586- 6696 | Christmas sd; Eutaw | F 64.8, 2.084 mln ¾" | 67 | SD; seis | Indicates develop of huge new gas-condensate fld. Lies within triangle of 3 domes—Stringer, Soso, and New Home. Very fast development indicated. |



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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **MISSISSIPPI—New Distillate Field** | | | | | | | | | |
| Marion | Hub | Humble's A. Evans 1, 660 ft s 1980 ft w nec 15-2n-18w, 8 mi se Columbia | 9-28-44 | 3- 3-45 | 9554 | 9066- 9236 | L. Tuscaloosa sd; Cre | F 716, 1.55 mln; ½" | 52 | SD; seis | Gas-oil ratio of this fld appears favorable to future development. |
| | | **MISSISSIPPI—Oil Field Extension** | | | | | | | | | |
| Lamar | Baxterville | Superior Oil Co.'s Batson 1, nw ne sw, 17-1n-16w, 1½ mi se Gulf's Cooper 1, disc well. | 1- 4-45 | 3- 1-45 | 8846 | 7478- 8844<br>8770- 8844 | U. Tuscaloosa sh & sd; Cre Massive sd; Cre | F 10, 2.952 mln; ⅞"<br>F 582; ¼" | 48.4<br>16 | SD; seis | Extends prod of Baxterville fld 1½ mi se. |
| | | **MONTANA—Gas Field Extension** | | | | | | | | | |
| Toole | Devon | Texas Co.'s Wier 1, c ne se ne 4-33n-1e, 3 mi e Kevin-Sunburst gas area | 2-21-45 | 3-27-45 | 1647 | 1645- 1647 | Madison li; Miss | F 36, 2.053 mln | 28 | Str trp; dr | Only continued drilling will determine extent of prod, not expected to be large. |
| | | **NEW MEXICO—Oil Field Extension** | | | | | | | | | |
| Lea | Cap Rock | Geo. P. Livermore, Inc.'s Williams 1, c nw ne, 7-13s-32e, 1¾ mi s Cap Rock pool. | 12- 7-44 | 3-23-45 | 3064 | 3045- 3064 | Queen sd; Perm | P 12 | 38 | Ant; geol | Not important, although no failure between this extension and field. |
| | | **OHIO—New Gas Fields** | | | | | | | | | |
| Hocking | | Preston Oil Co.'s Sunday Creek Coal Co. 253, sec 2 Starr twp | | 3- 4-45 | 1162 | 1157- 1162 | Berea sd; Miss | F 1.24 mln | | | Another len has been staked se of well. |
| Lorain | | Hanley-Bird's Rose Mlazovsky 1, lot 22, nw part Grafton County | | 3-10-45 | 2506 | 2490- 2504 | Clinton sd; Miss | F 3.297 mln | | | Company will move 1 len to n for next test. |
| Muskingum | | Wasson & Co.'s Bell 1, Harrison twp | | 2-28-45 | 4228 | - 4228 | Clinton sd; Miss<br>Medina | F 3 mln, 30 | | | Abt 2 mi fr nearest Clinton prod; some Medina oil within mi of well. |
| | | **OHIO—Gas Field Extension** | | | | | | | | | |
| Lorian | Huntington | Glen Harmon's H. C. Hicks 2, lot 2, Huntington twp | | 3- 8-45 | 2456 | 2442- 2456 | Clinton sd; Miss | F 8 mln | | | Extends pool 1 mi to w. |
| | | **OKLAHOMA—New Oil Field** | | | | | | | | | |
| Creek | Unnamed | Dale Sneed's Eaton 1, sw nw se, 12-14n-10e, 2 mi w of E. Edna pool | | 3-15-45 | 2595 | 2550- 2594 | Dutcher sd; Penn | P 45 | 38 | Ant; dr | Not considered important; characteristics of usual sml prod "pimples" which cover fr 40 to 160 ac; old well drilled deeper fr 2137 ft. |
| | | **OKLAHOMA—New Gas Fields** | | | | | | | | | |
| Kay | Unnamed | Kay County Gas Co.'s Fruits 1, nw nw se, 3-25n-2w, 5 mi w Ponca City pool | | 3-19-45 | 4735 | 4383- 4475 | Mayes li; Miss | F 8.5 mln | | Ant; sub | Fair gas strike; may cover 320 ac. |
| Stephens | Unnamed | Carter Oil Co.'s Frensley 1, ne ne, 12-1n-6w, 4½ mi ne Cruce | | 3- 3-45 | 6785 | 913- 925 | Permian li; Perm | F 2.5 mln | | Ant; seis | Unimportant. |
| | | **OKLAHOMA—New Gas Pay** | | | | | | | | | |
| Oklahoma | W. Edmond | Sohio's Patton 1-B, csw sw, 27-14n-4w | | 3- 7-45 | 6935 | 6412- 6436 | Prue sd; Penn | F 7 mln | | Str trp; dr | New prod zone for W. Edmond pool; first test to prod fr Prue sd although zone pentrated in other wells; 4th prod zone in pool, others being Bois D'Arc (Most prolific), Chimney Hill, Bartlesville. |
| | | **UPPER TEXAS GULF COAST—New Oil Fields** | | | | | | | | | |
| Brazoria | Blue Lake | Glenn H. McCarthy's Ida Dudley Wilson 1, 330 fr s&el 120-ac lse 330 n of nl Wm. Roberts sur in John Bradley sur on Stanolind farmout. | 8-26-44 | 2- 9-45 | 10808 | 8702- 8714 | Frio sd; Olig | P 60.78, 10% wtr | 34.8 | | Single-well reserve estimated between 235,000 to 250,000 bbls. |
| San Jacinto | | Navarro Oil Co.'s Foster Lbr. Co. 1, 1170 n of nl Amerada's 40-ac J. J. West lse 933 sw of swl of Polk Co Sch. Ld. sur on 1006-ac lse, Geo Taylor sur. | 12-28-44 | 2-24-45 | 7960 | 7883- 7915 | Wilcox sd; Eoc | F 74.58; ¾" | 38.5 | | Single-well reserve estimated between 765,000 to 800,000 bbls. Second well topped sd 35 ft higher. |
| | | **UPPER TEXAS GULF COAST—New Distillate Field** | | | | | | | | | |
| Tyler | S. Hyatt | Atlantic's Houston-American 1, 660 fr wl 550 fr nl 471.52-ac lse and sec 3 BBB&C sur. | 11- 7-44 | 2-23-45 | 9015 | 8374- 8382 | Wilcox sd; Eoc | F 399.6, 0.3% wtr; ¼" | 54.9 | | Single-well reserve estimated 365,000 bbls. distillate, 1,820,000,000,000 cu ft gas, 160 acres |
| | | **UPPER TEXAS GULF COAST—New Oil Pay** | | | | | | | | | |
| Hardin | Sour Lake | Earl C. Hankamer's Bass 1, 125 fr wl 155 fr nl 10,275-ac unit, Stephen Jackson sur, 575 e se of Lynn 1. | 1-24-45 | 3-11-45 | 3648 | 3494- 3509 | Oligocene sd; Olig | F 207.92; ¾" | 39.4 | | Single-well reserve estimated between 360,000 to 400,000 bbls. |
| | | **UPPER TEXAS GULF COAST—Oil Field Extension** | | | | | | | | | |
| Liberty | S. Esperson | General Crude's Sun Oil Co. (Esperson B) 17-B (1-C) 800 fr wl 500 fr sly/sl 103.35-ac lse, F. M. Gardner sur, 2000 e ne of Welch-Fee 10 at Kirby fld. | | 2-23-45 | 6174 | 5940- | Yegua sd; Eoc | F 135.13, 0.4% wtr; ⅛" | 37.1 | | Extends Esperson fld 2400 ft w little s. Single-well reserve estimated between 975,000 to 1,000,000 bbls. |
| | | **LOWER TEXAS GULF COAST—New Oil Fields** | | | | | | | | | |
| Bee | S. Tulsita-Wilcox | Fred W. Shield's J. L. Courtney 1, 786.5 sw of nel of R-of-way of Hwy 16 1600 n of sl of 400-ac lse in Tulsita twnsite. | | 2-20-45 | 7504 | 7030- 7059 | Wilcox sd; Eoc | F 110; ⅛" | 37.8 | | Single-well reserve estimated at 580,000 bbls. |
| Brooks | Mariposa | Humble's D. Sullivan Acct. 1-1, 3000 fr el 660 fr nl M. D. Floyd sur 152, 1043.55-ac lse, 8 mi se Falfurrias. | 9-16-44 | 3- 8-45 | 8545 | 8535- 8545 | Vicksburg sd; Olig | F 101, 3.2 mln. F 293.9; ⅛" | 40.7 | | Dual completion. Upper gas sd—single-well reserve (40-ac) 28,350 bbls dist, 900,000,000 cu ft gas. Lower oil sd—single-well reserve estimated between 240,000 to 260,000 bbls. |
| Brooks | | Texas Co.'s McGill Bros. 1, 466 fr w&sl 7110-ac lse, J. A. & A. M. Garcia sur, 13 mi sw Encino. | | 2-22-45 | 6795 | 6114- 6120 | Frio sd; Eoc | F 276; ⅛" | 40.1 | | Single-well reserve estimated at 200,000 bbls. |
| Fayette | Arnim | Continental's E. A. Arnim Jr. 1, 330 fr s&el 30-ac tr No. 5 on 372.16-ac lse, J. S. Menefee 1/3 lge. 5 mi nw Flatonia. | 12-16-44 | 3- 1-45 | 5405 | 2040- 2060 | Wilcox sd; Eoc | P 80.52, 0.1% wrt | 20 | | Single-well reserve estimated at 160,000 bbls. |
| Goliad | W. Goliad | Sun's R. A. Thompson 1, 467 fr wl 1537-ac lse, 12,346 fr swc 3800 fr nwc lse, Ignacio Guajardo sur. | | 2-25-45 | 11192 | 11182-11192 | Wilcox sd; Eoc | F 314.64 | 44.1 | | Single-well reserve estimated between 240,000 to 260,000 bbls. No sd recovered as well blew out while coring; comp through stuck drillstem. |
| San Patricio | | H. H. Howell's C. A. Maedgen 1, 467 fr nw&nel of 204-ac lse, Mathis Rch subdvn blk 4, 2 mi sw Mathis. | | 2-28-45 | 5230 | 4160- 4196 | Frio sd; Olig | F 26, 0.33% wtr | 36.5 | | Single-well reserve estimated at 1,000,000 bbls. |
| Willacy | Raymondville | Texas Co.'s Yturria Ld. & Live Stock Co. 5, 660 fr sl sh 3, 15,900 fr el 10,913.3-ac lse, San Juan de Carricitos Gr, 8058.3 sw of well 1. | 1-13-45 | 3- 6-45 | 6985 | 6346- 6349 | Frio sd; Olig | F 91.08, 9% wtr | 42.9 | Flt ant; seis | Single-well reserve estimated at 240,000 bbls. |
| | | **LOWER TEXAS GULF COAST—New Distillate Fields** | | | | | | | | | |
| Karnes | Coy City | Seaboard of Deleware's Sallye Treadwell 1, 1980 fr nl 660 fr el 646-ac lse, Henry S. Brown sur, 2 mi se Coy City. | | 3-15-45 | 8005 | 7144- 7149 | Wilcox sd; Eoc | F 147, 19 wtr ¼" | | | Single-well reserve distillate estimated at 82,000 bbls, gas 1,200,000,000 cu ft. |
| Karnes | | Phillips' W. P. Belknap 1, 3000 fr nel 400-ac lse and Chas. Haynes sur, nw 400-ac of 1199-ac W. P. Belknap Jr. ld, 7½ mi se Kenedy. | | 2-20-45 | 8033 | 7031- 7035 | Wilcox sd; Eoc | F 110; 7/32" | 59 | | Single-well reserve estimated at 53,000 bbls distillate, 1,200,000,000 cu ft gas. |
| Live Oak | Kittie West | Continental's Kittie West Schreiner 1, 330 fr nel 330 fr nwl 80-ac lse, D. R. Fant & J. Poitevent sur, on lot 567. | 9-29-44 | 3-23-45 | 7614 | 6705- 6711 | Wilcox sd; Eoc | F 46, 15.6% wtr, 7.5 mln; ¼" | 55.2 | | Single-well reserve distillate estimated at 30,000 bbls, gas 1,920,000,000 cu ft. |
| | | **LOWER TEXAS GULF COAST—New Gas Fields** | | | | | | | | | |
| Hidalgo | | La Gloria Corp.'s South-Weslaco 1, 467 fr s&wl tr 371 sec 165 Llano Grande sur, 1 mi sw Weslaco. | 8-28-44 | 3- 1-45 | 8943 | 7455- 7485<br>7404- 7420 | Frio sd; Olig | F 54 mln | | | Single-well reserve estimated at 48,000,000,000 cu ft gas. |
| San Patricio | | Stanolind's Welder Rch Lds. 2, 4020 e 4140 s of nwc of 2000-ac lse, Victoriano Taresand Pedro Villareal Gr. | | 2-18-45 | 8015 | 3375- 3381 | Catahoula sd; Mio | F 7.4 mln; ¼" | | | Single-well reserve 2,000,000,000 cu ft. |

# New Oil and Gas Fields and New Pay Horizons Discovered in the United States in March, 1945

## Also Important Extensions to Established Fields

| COUNTY | FIELD | COMPANY, WELL AND LOCATION | Date Spudded | Date Completed | Total Depth (Feet) | Completion Horizon (Feet) | [1]Name, Character and Age of Producing Formation | [2]Initial Production Method and Choke | Gravity of Oil | [3]Structure: [4]Method of Discovery | Tentative Evaluation of Discovery or Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion). |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **LOWER TEXAS GULF COAST—New Distillate Pay** | | | | | | | | | |
| Victoria | Heyser | Magnolia's O. M. Lander 1, 277 fr sel 38.43-ac lse, J. E. Calaban sur, 317.8 sw of No. 3 467.3 e&n of No. 5 (OWDD). | ..... | 3- 5-45 | 7444 otd 5750 | 7119- 7123 | Frio sd; Olig | F 124.36, 120 mln | .... | ..... | Single-well reserve estimated at 24,000 bbls distillate, 2,400,000,000 cu ft gas. |
| | | **NORTH TEXAS—New Oil Field** | | | | | | | | | |
| Jack | ..... | Panhandle Ref. Co.'s T. H. Cherryhomes 1, 467 ft nsl and 2498 ft fr M/W/W line of Reuben S. Gorder sur A-126, 1⅝ mi ne of Worsham-Steed 4700-ft pool | 12-12-44 | 3-18-45 | 5092 | 5035- 5050 | Basal Bend li; Penn | F 168; ⅛" | 41 | Ant; geol | Sml prod area. Single-well reserve of 160,000 to 200,000 bbls. |
| | | **NORTH TEXAS—New Oil Pay** | | | | | | | | | |
| Wilbarger | Harrold | Big Six Oil Co.'s Schlaffke-Morris 1-A, 760 ft nsl and 737 ft wel H&TC Ry. Co. 3, blk 14, offsetting multi-pay Canyon Wells. | 11- 2-44 | 3- 3-45 | 5146 | 4830- 4874 | Mississippian li; Miss | F 62½; ¾" | 45 | Ant; geol | Oil flow subnormal for depth; more attractive prod fr deeper zone may occur to nw. |
| | | **SOUTH CENTRAL TEXAS—New Oil Field** | | | | | | | | | |
| Wilson | Stockdale | Stanolind's J. E. Watkins 1, 467 fr sel&swl 60-ac lse James Bradley sur. | 9-14-44 | 2-19-45 | 5195 | 5145- 5154 | Wilcox sd; Eoc | P 13.66, 23.80% wtr | .... | ..... | Single-well reserve estimated between 70,000 and 80,000 bbls. |
| | | **SOUTHWEST TEXAS—New Oil Field** | | | | | | | | | |
| Duval | Gormac | J. W. Gorman-McDermott's J. F. Welder 2, 330 fr w&sl sec 211, 2600 sw of well No. 1, on 455.89-ac lse, J. Poitevent sur. | ..... | 2-15-45 | 2510 | 2470- 2480 | Jackson sd; Eoc | F 107; ¼" | 24 | ..... | Single-well reserve estimated between 280,000 to 300,000 bbls. |
| | | **WEST CENTRAL TEXAS—New Oil Fields** | | | | | | | | | |
| Jones | ..... | Primo Oil Co.'s Mrs. M. A. Martin 1, 330 ft snl and 800 ft ewl of 320-ac tr and sec 13, Jos. Weihl sur, 1¼ mi sw of 1-well pool in same zone. | 2-12-45 | 3-23-45 | 1638 | 1623- 1633 | Bluff Crk sd; Penn | P 115 | 36.4 | Ant; geol | Small but attractive pool. |
| Jones | ..... | M. M. Travis' A. Nobles 2, 990 ft nsl and 330 ft ewl of 87½-ac lse, N. Travino sur No. 190, offsetting 5156-ft Ellenburger failure. | 9-30-44 | 3-23-45 | 2188 | 1937- 1948 | Flippen li; Penn | P 4, 3 wtr | .... | Ant; sub | Unimpotrant. |
| | | **WEST CENTRAL TEXAS—New Gas Field** | | | | | | | | | |
| Shackelford | ..... | Eltex Ltd.'s G. R. Davis 1, nw nw nw T&P Ry 57, blk 13, 2½ mi e nearest prod. | 11-27-44 | 3- 6-45 | 1812 | 1800- 1812 | Upper Hope sd; Penn | F 3.02 mln | .... | Ant; geol | Originally an Ellenburger project. Not important as gas reserve. |
| | | **WEST TEXAS—New Oil Fields** | | | | | | | | | |
| Andrews | ..... | Stanolind's University 1-D, 2051 ft ewl and 660 ft nsl sec 8, blk 11, 3½ mi w, W. Andrews fld, nearest prod. | 5-29-44 | 3- 6-45 | 10466 | 8300- 8350 | Devonian li; Dev | F 289, 4 wtr; ¼" | 41 | Ant; geol | Important sweet crude strike, probably sml in area as 8536-ft Devonian failure 1¼ mi nw. Devonian entered at 8037 ft; thick sect effective saturation, confirmed by drill-stem tests, not perforated. Possible prod in 6600-ft Fullerton zone. |
| Andrews | ..... | Sun's N. C. Martin, c se se PSL 17, blk A-41, 2 mi n by w of W. Andrews pool (San Andres zone). | 8-15-44 | 3-16-45 | 7036 | 6850- 7036 | Basal Clear Fork li; Perm | F 301; ¼" | 35.7 | Ant; geol | Important disc, was to have been Ellenburger test, with probable pay at 6790–6850 ft cased off. Single-well reserve of 320,000 to 400,000 bbls. Classed as sour crude. |
| Gaines | Robertson | Texas Co.'s J. B. Robertson 2, c ne ne PSL sec 21, blk A-24, ¾ mi w of pool disc in Glorietta at 5910-5992 ft. | 11- 2-44 | 3- 9-45 | 6455 | 6360- 6420 | Upper Clear Fork li; Perm | F 363, 12% wtr; 2" | 29.1 | Ant; geol | This new and deeper pay is natural flow and 3° higher grav; will be objective of future tests in area; prod area speculative. |
| Garza | ..... | Honolulu Oil Corp.-Devonian Oil Co.'s Elmer Hitt 1, sw ne ne HE&WT Ry 2, blk 1, 2 1/3 mi e by n of PHD pool fr same zone but separated by failure. | 12-12-44 | 3-22-45 | 3553 | 3512- 3553 | San Andres li; Perm | P 135; 12 wtr | 37.1 | Ant; geol | Not important. Top of pay is same geol zone, but 21 ft higher structurally than PHD pool, which is separated by failure. |
| Hockley | Levelland | Texas Co.'s L. Y. P. Montgomery 1, 580 ft out of nec Labor 19, lge 70, Val Verde Co Sch Lds., 7 mi n of Slaughter fld, nearest prod. | 10-10-44 | 2-23-45 | 4927 | 4750- 4927 | San Andres li; Perm | P 95, 9 wtr | 29 | Ant; geop | Initial output subnormal. Comparatively little net pay in section. Dependent upon tank trucks for market. |
| Lubbock | Cravens | Seaboard Oil Co.-Stanolind's L. M. Cravens 1, c sw sw sec 16, blk D, L&SV Ry sur, 11½ mi n by w Lubbock 4900-ft pool, nearest. | 9- 9-44 | 2-28-45 | 8800 | 6050- 6166 | Clear Fork li; Perm | P 136, 34 wtr | 24 | Ant; geol | Low gravity pumper 2nd disc on top granite uplift extending e-w across Permian Basin, partially confirming possibility of series Clear Fork flds. Prod performance disappointing. |
| | | **WEST TEXAS—New Oil Pay** | | | | | | | | | |
| Pecos | MacDer | Humble's D. Co. Wilson 1, 711 ft nsl and 1980 ft ewl of T&StL Ry. sec 1, blk 145. | 2- 8-45 | 3-22-45 | 5238 | 4723- 4733 | Wolfcamp | F 70, 100 wtr 0.945 mln; 11/64", 11/64" | 32 | Ant; geol | Originally comp 5-24-44 as 13,300,000-ft gasser fr perforations at 4723-33 ft; oil made appearance as gas volume decreased. First in district to prod fr Wolfcamp. |
| Winkler | Wheeler-Ellenburger | Sun's R. A. Wheeler 1, c ne se PSL sec 13, blk B-7, sw side fld; 1st dual comp for fld. | 6- 4-44 | 3-22 45 | 10610 | 8540- 8590 | Devonian li; Dev | F 371; ¼" | 34.3 | Ant; geol. | Fld's first dual comp and first for Devonian zone, altho other well indicated commercial prod in same. Devonian oil classed as sour, having .85% sulphur and 0.092% salt, being ineligible for connection fr single line serving fld. Devonian tentatively given oil recovery of 100 bbls per ac ft. |

[1] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale, ser, serpentine; cgl, congolmerate. Ages of formations abbreviated thus: Pleis, Pleiocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Dev, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian.

[2] Barrels of oil per day (24 hr. rate), flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [3] Type structure abbreviated as follows: Ant, Anticline; D, Dome; Fld, Fold or Folded; Flt, Fault or Faulted; M, Monocline; N, Nose; SD Salt Dome; Str trp, Stratigraphic trap; Syn, Syncline; Ter, Terrace. [4] Method of discovery abbreviated as follows: cd, core drilling; dr, drilling; geol, geology; geop, geophysics; grv, gravity meter; ran dr, random drilling; seis seismograph; sub, subsurface geology; sur, surface geology.

## Waste Must Go

By EARL FOSTER,* Secretary
Interstate Oil Compact Commission

# Postwar Conservation

IT IS quite evident that in the postwar period more effective and efficient plans of conservation must be devised.

Proper spacing of wells, now rather generally accepted, must be improved. Programs of unitization and communitization will be absolutely necessary. Repressuring, pressure maintenance, cycling, recycling, gas-oil ratio, secondary recovery and numerous other well recognized principles will warrant more serious consideration. If we can approach the ideal in primary recovery by pressure maintenance and other methods, then secondary recovery will become more or less unimportant. The control of water in the reservoir is most important.

Gas conservation is just coming into its own. Originally regarded as a nuisance in the production of oil, it is now recognized as a most valuable asset. One company plans to spend a million dollars in West Texas in order to save gas produced in its oil wells. Most of you are acquainted with the recent programs in New Mexico and other places throughout the United States. Gas produced from oil wells, much of which was wasted in such fields as Oklahoma City and Seminole, must and will be utilized during the postwar period.

Deeper wells, both for oil and gas, will be drilled, new fields will be found, larger areas will be developed, and new equipment for production will be invented. All these will challenge the ingenuity and intelligence of the men of science, the geologist and engineer, who will continue to be the principal spoke in the wheel of progress in conservation.

### Improved Oil Legislation

Additional consideration will be given to laws, rules and regulations. At the present time most states have some sort of a conservancy law. Some of them are quite inadequate, others are quite efficient. All can be improved. Never in the history of oil has interest in oil and gas legislation been so keen.

Oklahoma, which has had good conservation laws since 1915, a more efficient one in 1933 and the first spacing law in 1935, has introduced more statutes in the present Legislature effecting oil and gas conservation than ever before in its history.

California, although said by some to be rather backward in legislation, considered at the last session some 15 or 20 acts directly or indirectly effecting conservation.

Florida with only one well and 50 barrels daily production, is considering the most effective and efficient conservation law in the United States today.

Georgia, without any oil and gas, passed in its recent session a law modelled after the Arkansas act.

North Dakota two years ago, with no oil and very little gas, enacted a conservation statute.

Alabama with oil of recent discovery has at the present time a rather good law, but is considering a more efficient one.

Kansas recently enacted a new law on gas conservation.

Texas with a great background of conservation is considering many statutes in its present session.

Wyoming, Illinois, and practically every other state, are taking note of their conservation laws.

In time of war, production is rightfully in the driver's seat, and conservation in certain aspects is forgotten. But when peace comes, conservation will take the lime-light and production will play a second part.

It is most interesting therefore to observe that even in time of war there is more interest being demonstrated in oil and gas conservation than ever before. This definitely points to an interest in conservation immediately following the war greatly in excess of what has ever been thought of in the past.

### Accomplishments of PAW

We will have before us the determination of the proper agency to regulate this great industry. During the present war the PAW and its agencies have accumulated a large amount of information, and have promulgated many rules and regulations, some of which are good, such as M-68 and PAO-11, and others which must be recognized. The question for the states is, will they be in a position to adopt that which is good in federal regulations after the present war has passed.

While it is almost universally accepted that the state agency with the cooperation of the industry is best fitted to regulate the oil and gas industry, there are those who will point with pride to the accomplishments of the federal government and insist upon its regulation in order to prepare for national defense and to promote the general welfare. State agencies, with the cooperation of the industry, can and no doubt will, be in a position to meet these arguments and once and for all settle the much controverted question that the state agencies working in conjunction with the industry, being located in the field of action, are better qualified to assist the oil men in preventing the waste of these great natural resources and promulgating rules and regulations that will result in the greatest ultimate recovery and protect correlative rights.

The rights of the individual owner must never be forgotten.

In all conservation legislation the individual and private rights of royalty owners, lessees, and all those interested in a field must be kept in mind. These property rights must be protected. The small property owner is the cornerstone of American democracy. Whenever the police power of the state is exercised to preserve a natural resource, the rights of those who own the product in its natural state must be safeguarded. This obligation, recognized in the past, will require more consideration in the future. Pooling of small tracts and unitization in areas of deep production are essential in many fields, but this will entail many problems for proper protection of the owners' rights. No program can or should succeed that is not on a fair and just basis to those interested. Owing to the complicated problems that will present themselves in oil development immediately following this war, there will be a greater need for honesty, integrity, and fair dealing than ever before. The right of the other fellow must be constantly kept in mind.

### Rights of Small Owners

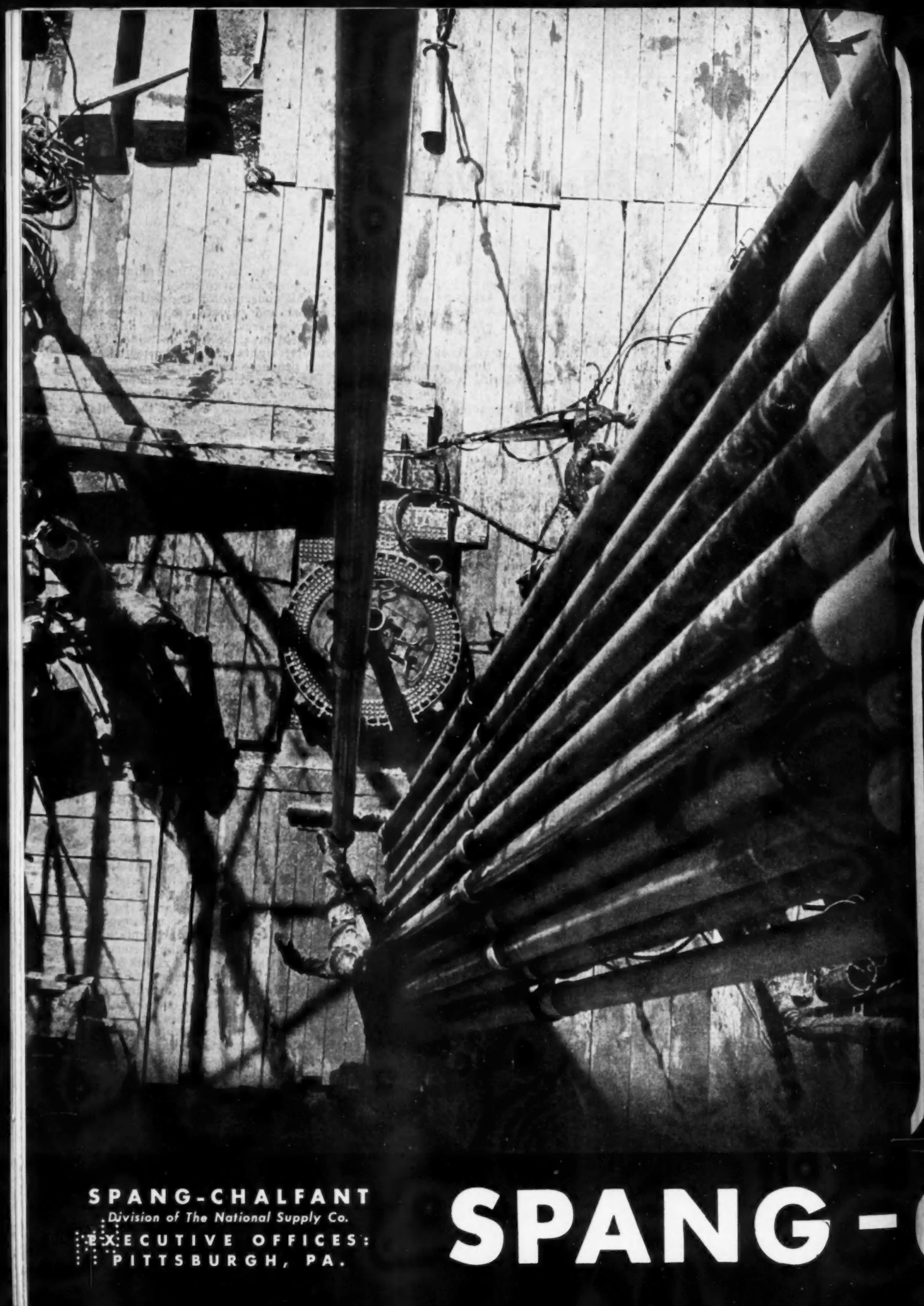
While the effectiveness of some of the rules and regulations promulgated by PAW cannot successfully be questioned, the most astute students of federal regulation have failed to point out any effective provision designed to safeguard the private rights of the individual owner, especially those owning a small tract. It is in this field that the state can and should be most effective. Federal government looks largely to national defense, and this should be its exclusive field. But certainly in the protection of individual rights, the state is supreme.

From this viewpoint conservation takes on a two-fold meaning: In addition to the protection of a commodity with a material dollars and cents value, conservation also means the preservation of inherent and treasured rights of men, of precious human liberties, of a way of life and a form of government for which men have gladly laid down their lives. Conservation in this sense means the conservation of individual rights as well as the conservation of a natural resource.

Realizing that there must be cooperation between the various states and as near uniform laws, rules and regulations as possible, the Interstate Oil Compact Commission was organized in the year 1935. Its purpose was the coordination of the activities of the various states and to accumulate and dispense information that would be valuable to all.

It was a cooperative attempt to demonstrate the practicability and necessity of states, through the cooperation of

*Digest of a talk presented April 9, 1945, before the Oil and Gas Division of the Oklahoma City Chamber of Commerce.



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the industry, to regulate their own affairs.

It was conceived on the theory that more can be accomplished by cooperation than by coercion. That the best laws and rules and regulations are those promulgated with the consent to the governed.

Originally consisting of six states, it has now grown to 15 oil-producing states, representing approximately 85 percent of the oil produced in the United States, it has no executive or judicial power. Its only power is its influence. It rests its fate upon its ability to make democracy effective. It has been said that it is democracy at work.

"The purpose of this compact is to conserve oil and gas by the prevention of physical waste thereof from any cause." And one of the greatest producers of oil in this country has referred to this purpose as "the most powerful 21 words in American industrial life today."

### Compact's Record

The Compact has just right to be proud of its record. With a meager beginning, it has had a part in the development of the greatest program of oil and gas conservation ever known in this country; the most efficient conservation programs have been promulgated in the last 10 years.

The Compact presents to the oil man the most efficient agency to carry into effect his ideas of local control and individual initiative. In the postwar period, if a proper program is to be promulgated along accepted lines, there must be a renewed interest in the Interstate Oil Compact Commission, or the program of conservation will not progress satisfactorily.

Conservation is the most important factor in the development of the oil and gas industry. During war it may temporarily be sidetracked, but in the postwar period it is sure to come into its own. The conservation of oil and gas is the most important single factor in the future development and expansion of the industry. The hundreds of thousands of enterprising men and women whose labor, combined with courage, vision and skill, created and built this great industry so typical of America's progress, have long known and advocated this salient truth. The industry's technicians, engineers, economists and scientists, through exhaustive studies and exacting experiments, have established irreputable proof of conservation's worth. Men of government are united in adhering to the basic principles of conservation in their regulation and protection of the public interest in these two vital natural resources.

During the extraordinary conditions attending our country's participation in the present global war, certain phases of the conservation program have been relaxed. However, even out of those circumstances will accrue much good to the conservation cause. Every person in the United States has felt the effect of curtailed domestic supplies of petroleum and its products and is keenly aware of the urgent and constant need to protect and "conserve oil and gas by the prevention of physical waste thereof from any cause." Truly those are "the most powerful words in America's industrial life today."

## Exploration

■ CONTINUED FROM PAGE 52

from pre-war days, and that back-log now is being drawn upon as the next most expedient step after highly developing existing fields.

The threat for the future is that wartime necessity for using up prospects as well as existing fields may leave the nation seriously short on good prospects as well as developed reserves. Pre-drilling exploration has been handicapped during the war period by shortages of skilled manpower and other causes, while existing oil reserves have been drawn upon at the highest rates in history, indicating that the mapping of favorable prospects has been seriously inadequate.

These data signify that the industry has gone "all out" in supplying oils needed to fight the war, at the expense of making heavy inroads into all possible crude sources, developed and undeveloped, but that it will be left after the war in a seriously exhausted and sub-normal condition with regard to reserves, which necessarily will be replaceable for individual companies only at costs much higher than before the war. This increased cost of replacing reserves is, in fact, a reality even now, and it doubtless is a very important reason for continuing failure to invoke the volumes of exploratory drilling considered essential under this year's program.

### California Discovery

Although California is very much in need of new oil reserves, March brought no additions. The only discovery of the month was a new gas field, four miles north of the Rio Vista gas field, Solano County, productive at 4800 feet and offering promise of developing into a major gas source.

In the Rocky Mountain region, similarly, the only successful exploratory completion of March was a well in Toole County, Montana, which extended the Kevin-Sunburst gas area 3 miles east, yielding 28-gravity oil and gas.

New Mexico's only successful exploratory test was one in Lea County which extended the Cap Rock pool 1¼ miles south, with production at 3050 feet.

In PAW District 2 there were fairly favorable results in exploration. Illinois gained three new oil pools, while two fields were extended, one gained a new pay zone, and one was given by the same well an extension and a new pay. In addition, Illinois was credited during the month with two additional "new pools" by revision of earlier classifications which had shown those two producing areas for several years as extensions of older fields.

### Michigan Record

Michigan's record for March comprised two oil field discoveries and a new pay.

In Kansas three new oil fields were discovered and an older field was extended, while a new gas field was found. The three new pools are in Ellis, Graham, and Sumner counties, and each appears fairly important.

Kentucky's single successful exploratory completion of March extended the Utica pool, Daviess County.

Oklahoma had an unimpressive record for the month. A new oil pool was opened in Creek County, two miles west of the East Edna pool but it is considered a typical small pool of the district. A new gas field in Kay County five miles west of the Ponca City pool may develop into a half-section field, but one in Stephens County 4½ miles northeast of Cruce is not considered very important. A good gas well at West Edmond opened a new pay zone there in producing from the Prue sand.

In PAW District 3, which is being depended upon heavily for supplying new oil and gas reserves for the nation, there were fairly good results in exploration of March. Mississippi, Louisiana, and Texas contributed successful completions.

In Mississippi the Baxterville field, Lamar County, heretofore a one-well field, was extended 1½ miles southeast.

Arkansas and Eastern Texas recorded no successful exploratory well completions in March, while North Louisiana gained a new oil producing area in Caddo Parish and a gas field in Franklin Parish. South Louisiana had an exceptionally good month, as four new oil fields were found in Assumption, Beauregard, Jeff Davis, and Jefferson parishes, while the Potash field of Plaquemines Parish gained a new oil producing zone and West Tepetate field of Jeff Davis Parish provided a new condensate pay zone.

In North Texas a small oil field was found in Jack County and a new oil pay in the Harrold field of Wilbarger County. In West Central Texas two small pools were opened in Jones County and a gas field in Shackelford County. West Texas had better than normal results, as there were several important strikes among discoveries of six new oil fields and two new oil pay zones.

In the Upper Gulf Coast of Texas successful tests of several classes opened new oil fields in Brazoria and San Jacinto counties and a new distillate field in Tyler County, extended South Esperson field of Liberty County, and provided a new oil pay zone at Sour Lake field, Hardin County. The lower Gulf Coast of Texas had a long list of discoveries, including an oil field in Bee County, 2 in Brooks County, 1 in Fayette County, 1 in Goliad County, 1 in San Patricio County, and 1 in Willacy County.

**Summary of Results of Exploratory Drilling**

| ITEM | Mar., 1945 | Feb., 1945 | JANUARY-MARCH 1944 | JANUARY-MARCH 1945 | Percent Dif. |
|---|---|---|---|---|---|
| **Oil Discoveries** | 45 | 36 | 105 | 126 | + 20.0 |
| New Fields | 38 | 27 | 69 | 94 | + 36.2 |
| New Pays | 7 | 9 | 36 | 32 | — 11.1 |
| **Distillate Discoveries** | 6 | 6 | 10 | 13 | + 30.0 |
| New Fields | 5 | 4 | 9 | 10 | + 11.1 |
| New Pays | 1 | 2 | 1 | 3 | + 200.0 |
| **Gas Discoveries** | 12 | 13 | 23 | 30 | + 30.4 |
| New Fields | 11 | 11 | 18 | 26 | + 44.4 |
| New Pays | 1 | 2 | 5 | 4 | — 20.0 |
| **Total Discoveries** | 63 | 55 | 138 | 169 | + 22.5 |
| **Extensions to Fields** | 10 | 13 | 24 | 34 | + 41.7 |
| Oil Fields | 8 | 12 | 19 | 30 | + 57.9 |
| Distillate Fields | 1 | ..... | 4 | 1 | — 75.0 |
| Gas Fields | 1 | 1 | 1 | 3 | + 200.0 |
| **Total Prod. Tests** | 73 | 68 | 162 | 203 | + 25.3 |
| **Dry Holes** | 212 | 246 | 727 | 828 | + 13.9 |
| (Weekly Average) | 53.0 | 61.5 | 55.9 | 63.7 | + 13.9 |
| Wildcats | 208 | 237 | 716 | 803 | + 12.2 |
| New Pays | 2 | 5 | ..... | 11 | ..... |
| Outposts | 2 | 4 | 11 | 14 | + 27.3 |
| **Total Expl'tory Tests** | 285 | 314 | 899 | 1,031 | + 16.6 |
| (Weekly Average) | 71.3 | 78.5 | 68.4 | 79.3 | + 16.0 |
| Percent Productive: (Weekly Average) | 25.4 | 21.8 | 17.6 | 19.0 | ..... |
| Percent Dry: (Weekly Average) | 74.6 | 78.2 | 82.4 | 81.0 | ..... |

Dry hole completions are from weekly reports and totals represent completions for 4 weeks in March, 1945; 4 weeks in February, 1945; 13 weeks in Jan.-Mar., 1945, and 13 weeks in Jan.-Mar., 1944.

# Oil Companies' Pension Plans

## Efficiency With a Heart

By AL REESE, Staff Writer

TODAY he is Corp. Jack Smith, United States Army.

Tomorrow he will be Jack Smith, plain American, in search of a job. But not just any job, mister. Weary of uncertainty, fairly aching for security, he wants the kind of job that will be waiting for him every morning at the same desk in the same building on the same street. The kind of job in which a man can hold up his head and grow to be somebody. Jack wants a job with "the company."

The idea of going to work for the company—a typical major petroleum corporation—came from Frank Jones, a buddy who was handed his medical discharge late in 1943. Frank stepped right out of uniform into a spot with the company, and he calls it "a darned good place to work." Frank is particularly proud of the company's pension plan.

"I think that to fellows like you and me, who learned to appreciate a secure old age by diving into foxholes, a pension plan can be one of the greatest attractions a job can have," he had written in his last letter. "Take me, for example. If I stay with the company until I'm 65, and if I never make more than $200 a month, my pension will be exactly $103.88 monthly.

"If you're interested in the details, it figures like this: I was 30 years old when I went to work for the company at $135 a month, and we'll suppose my salary remains the same until I'm 35, then is $160 per month from age 35 to 40, $185 per month from 40 to 45, $195 from 45 to 50 and $200 a month thereafter.

"My retirement income would then be broken down as follows:

| | |
|---|---|
| "Federal old-age benefits (based on my company earnings plus earnings as a soda jerker and truck driver before I went into the service)..... | $ 45.33 |
| "Benefits provided by my contributions and those of the company from age 30 to 65.... | 35.88 |
| "Total retirement income at age 65 | 81.21 |
| "Wife's supplementary Federal old-age insurance benefits (equal to 50 percent of my Federal old-age insurance benefits above)..... | 22.67 |
| "Total retirement income..... | $103.88" |

### The Pension Rush

The case of Frank Jones is purely hypothetical, but not so the retirement figures, which are fairly typical of the pension plans that have laid the ghost of a dependent old age for 2 million American workers.

We are in the midst of the greatest corporate pension rush of all time. Before the war only about 1000 corporations had pension plans. At the end of 1942, there were more than 1600 group annuity plans alone covering 900,000 employes with a reserve liability held by insurance companies of more than a billion dollars, according to the National Industrial Conference Board's *Trends in Company Pension Plans.* At the present time the Treasury is swamped with applications for approval of more plans, and there is no estimating how many trust fund plans have been installed throughout the country by banks and trust companies or how many individual contracts are in force.

What is providing the impetus for the rush?

A paramount factor is the liberal tax deductions permitted by the Internal Revenue Code for company contributions to pension and profit-sharing trusts.

### Rewarding Employes

Another motive is that in a pension plan that qualifies under the code, company contributions are not considered salary increases. Hence, with salaries frozen under a wartime economy, pension plans provide a method of sharing profits with the employes, thereby lessening temptation to accept higher-paying positions elsewhere.

Still another factor in the pension rush is the realization that aging manpower must be likened to aging machinery if the company's efficiency is to be maintained. Retention of employes who are beyond the age of major usefulness is costly. Not only is their production below standard, but they act as a brake on efficiency in related jobs. It is efficiency—efficiency with a heart—to retire such wrokers on a liberal pension, allowing an inflow of younger, more energetic men whose abilities would be stifled by an until-death-do-us-part practice of retaining employes until their funeral day.

The conviction is also strong that pension plans help to promote employer-employe good will. This is ably summed up in a letter written by a personnel official of a major company in response to THE OIL WEEKLY's survey:

"We have found the plan very beneficial in the development of the family spirit among our employes. It has assisted very, very materially in reducing our turnover during the war emergency period. I have heard many men say that they would not consider other jobs because they did not want to interrupt their purchase of annuities, which together with the Federal Old Age Benefits, will make them a comfortable income when they reach 65."

The furthering of employer-employe goodwill was also stressed in the reply from another company: "A pension

# Principal Provisions of Employe Retirement Plans i

| | Employes Eligible | Normal Retirement Age | | MAXIMUM PENSION | | EMPLOYE CONTRIBUTION | |
|---|---|---|---|---|---|---|---|
| | | Males | Females | Annual Amount | Limited to Earnings of | Percentage | Interest Return o Withdrawal |
| Company A | All permanent employes with one year of service. | 65 | 60 | | 37.5 years | 2.25% of 1st $3,000, plus 4.5% of excess over $3,000. | 3% |
| Company B | All employes with six months service (compulsory after one year). | 65 to 70 | 65 to 70 | | 35 years | 3.62% to 6.37% based on age of entry. | 3 to 4% as determi by board of trus |
| Company C | All permanent employes with one year of service. | 65 | 60 | No maximum | | 1.6%—1.9% of 1st $3,000, plus 6% of excess over $3,000, by salary classes. | None |
| Company D | All employes reaching retirement age, who have 20 years service. | 65 | 55 | | 75% of average pay for 5 years before retirement. | Non-Contributory | |
| Company E | All permanent employes under age 64½ with one year of service. | 65 | 65 | No maximum | | Employe 4%, Company 4% including PIB. | First 3 yrs. contribution—No interest. on contribution 4th & subsequent y |
| Company F | All employes over age 21 with 1 year of service. | 65 | 60 | $20,000 | | 2% of first $250 a month, plus 5. of excess over $250 a month. | 2½% |
| Company G | All regular employes with one year of service. | 65 | 60 | No maximum | | 1.2%—1.44% of 1st $3,000, plus 3.6% of excess over $3,000. | None |
| Company H | All regular employes, under age 60/65, with one year of service. | 65 | 60 | No maximum | | 2% of 1st $3,000, 4% of excess. | None |
| Company I | All employes reaching retirement age with 15 years of service. | 60 | 55 | No maximum | | Non-Contributory | |
| Company J | Past Service—Employes age 46 and over, with 1 year of service and earning a salary in excess of $600.<br>Future Service—Employes age 35 and over with 1 year of service and earning in excess of $3,000. | 65 | 65 | $20,000 | | 3% of salary in excess of $3,000. | 2% |
| Company K | All employes with six months service. | 65 | 55 | No maximum | | 0% of 1st $600, 2.25% next $2,400, 3.00% of excess over $3,000, by salary classes. | None |
| Company L | All regular employes with one year of service. | 65 | 60 | No maximum | | 4%—7%, including PIB, based on age of entry. | 3.5% |
| Company M | All employes with one year of service. | 65 | 60 | Future Service $20,000 | Past Service: 75% of average annual earnings for 10 years prior to 1-1-39. | 2% of 1st $3,000, plus 5% of excess over $3,000.<br>Company—equal contribution. | 2.5% |
| Company N (a) | All employes hired prior to 1-1-34 and remaining in service continuously thereafter. | 65 | 55 | | 75% of average of last five years. | 3.5%—5% based on age of entry. | At least 3%. |
| Company N (b) | All regular employes. | 65 | 55 | $20,000 | | 1.5%—8% equaled by company. | In accordance wi group annuity co tracts. |
| Company O | All full time employes, under ages 60/65 with 6 months service. | 65 | 60 | No maximum | | 2.5% of 1st $3,000, plus 5.0% of excess. | 3.5% for original pa ticipants; 2.5% fo others. |
| Company P | All employes with 20 years continuous service and attained age 65. | 65 | 65 | No maximum | | Non-contributory | |
| Company Q | All regular employes with one year of service. | 65 | 60 | No maximum | | Approximately 2.5% to 4.125% of earnings by salary classes. | 3% on contributio prior to 7-1-42; 2% after 7-1-42. |
| Company R | All employes with one year of service. | 65 | 60 | No maximum | | 1.79% to 4.94% based on salary class. | 2.5% |

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plan tends to improve employe-employer relations, reduce the turnover in personnel and partly eliminates occupational hazards attributable to advanced age. We have no statistics showing the effect our retirement income plan has had on the aforementioned employment factors but we do feel that there has been some improvement. Such improvement will be more noticeable, perhaps, when employment conditions become settled after the war has been won."

### Types of Plans

To be successful, a pension plan must meet certain broad requirements while at the same time being tailor-made to the needs of the particular company.

The successful plan must benefit the employer in improved morale, greater efficiency, better public relations and tax advantages.

It must benefit the employe by guaranteeing an adequate income after retirement.

It must be based on a solid financial foundation that will weather bad times that inevitably follow the good.

Because the problems of most petroleum companies are approximately the same, it follows that their pension plans would be similar. This similarity was furthered by revisions that permitted the plans to conform with the social security act, and still more recently, by additional revisions granting greater benefits to employes.

Principal points in the plans studied are as follows:

*Types of Funding*—The group annuity plan dominates the field of petroleum companies, as well as all others, but the trust fund plan is attracting greater interest than formerly.

Under the group annuity plan, a master contract is drawn between the employer and an insurance company that underwrites and administers the pay-

# Force Among Representative Oil and Pipe Line Companies

| AMOUNT OF BENEFIT | | | VESTING OF EMPLOYE PURCHASES | | | | | METHOD OF FINANCE | |
|---|---|---|---|---|---|---|---|---|---|
| PAST SERVICE | | | If employe leaves service while plan is in force, subject to not withdrawing contributions | | | | | | |
| Percentage and Basis of Computation | Conditional on Joining Future Service | FUTURE SERVICE<br>Percentage and Basis of Computation | Years of Service | Years in Plan | Attained Age | Past Service Included if Purchased | If Plan is Discontinued | Insured | Trusteed Investment of Funds |
| 2% of average earnings for 1931-33 times years of service prior to 7-1-34. | No | 1% of 1st $3,000, plus 2% of excess over $3,000, of future earnings by salary classes. | 20 | Any | Any | Yes | Yes | Yes | |
| 1/70th of average earnings of 10 years prior to age 65 times years of service prior to 7-1-27. | Yes | Company: 1/140th of average earnings for 10 years prior to age 65 times years of service after 7-1-22, less ½ PIB.<br>Employe: From own contribution. | No Vesting | | | | Yes | | Yes |
| 1% of annual earnings on 12-31-38 times years of service back to ages 35/40. | Yes | .6% of 1st $3,000, plus 1.5% on excess over $3,000, by salary classes. | Any | 5 | 45/50 | Yes | Yes | Yes | |
| For employes having 20 years service, 2% of average pay for 5 years prior to retirement times years of service. Credit for past service is given to 5-1-35, based on 5 prior years earnings. | | | No Vesting | | | | | | |
| 1% of monthly earnings on 12-31-35 times years of service prior to 1-1-36. | Yes | Money Purchase | 20 | Any | Any | Yes | Yes | Yes | |
| 1% of average monthly earnings for 10 years prior to 1-1-41 times years of service prior to 1-1-41. | Yes | Money Purchase | 10 | Any | Any | No | Yes | Yes | |
| .5% of monthly salary on 1-1-38 times years of service prior to 1-1-38. | Yes | .6% of 1st $3,000, plus 1.5% of excess over $3,000, by salary classes. | 15 | 5 | Any | No | Yes | Yes | |
| 1% for each year of service prior to 1-1-36 up to 5 years. | Yes | 1% on 1st $3,000, plus 2% on excess, by salary classes. | 10 | Any | Any | Yes | Yes | Yes | |
| Employes with 20 or more years service at retirement age receive 40% of average pay for five years before retirement, less PIB and 4% company's contribution (plus interest) to provident fund. Employes with 15-19 years service receive proportional benefits.<br>**Note:**—Benefits under provident fund are in addition to retirement income. | | | No Vesting | | | | No Withdrawal by Company | | Yes |
| 1% of average salary of last 3 years between $600 and $3,000, plus 1½% of excess of $3,000, times years of prior service back to age 45. | Yes | 1½% of earnings in excess of $3,000 by salary classes. | Any | 10 | 45 | No | Yes | Yes | |
| 2% of 1930 salary times years of service prior to 1931. | 20 Years Prior Service | 0% of 1st $600, plus 1.5% of next $2,400, plus 2% of excess over $3,000 by salary classes. | Any | 5 | 40 | After 25 Years of Service | Yes | Yes | |
| 2% of average annual earnings between 1928-1933 times years of prior service. | Yes unless employee has prior service | 2%, including PIB, of future earnings. | 25 | Any | Any | Yes | Yes | Yes | |
| 1.5% average earnings for 10 years prior to 1-1-39 times years of prior service. | Yes | 1932-1935: 1% for non-contributors, 2% for contributors, of average earnings of last 5 years. | 10 | Any | Any | No | Yes | Yes (Future Service) | Yes (Past Service) |
| 2% of average earnings for 5 years prior to 12-31-31 times years of prior service. | No | 1932-1935; 1% for non-contributors; 2% for contributors of average last five years. | Any | 20 | Any | No | Yes | | Yes |
| No past service. | | Money purchase. | Any | Any | Any | No | Yes | Yes | Yes |
| 2% of 1931 earnings times years of service prior to 10-1-32. | Yes, if earning over $3,000. | 1% of $3,000, plus 2% of excess. | No Vesting | | | | Yes | Yes | |
| 1½% of earnings less PIB or $50 per month, including PIB, if greater. A reduced pension may be granted employes with less than 20 years and/or early retirement. | | | No Vesting | | | | | No | No |
| .5% of 6-30-37 earnings each year for 1st 10 years plus 1.5% for each year of prior service over 10. | Yes | Approximately 1% to 1.65% of earnings by salary class. | 20 | Any | Any | Yes | Yes | Yes | |
| Provided by Provident Fund (Discontinued 4-30-39) employe contribution 3%, employer 3% plus. | Yes | .69% to 1.90% according to salary class. | 15<br>20 | Any | 50<br>Any | Yes | Yes | Yes (Future Service) | Yes (Past Service) |

Towers, Perrin, Forster & Crosby, Inc.
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ment of pensions. Contributions take the form of premiums.

Under the trust fund plan, funds are deposited in an irrevocable trust and are invested in securities and pensions are paid out of this reserve when due.

*Employes Eligible*—The Internal Revenue Code provides that the pension plan may exclude those who have been in service less than five years, but most of the oil companies' plans demand only one year of service to make an employe eligible for benefits. A probationary period is necessary to exclude floaters, since each cancellation in an insured plan entails a surrender charge.

*Retirement Age*—With one or two exceptions, the age is 65 for men; for women workers, the usual age in 60, although some plans call for retirement at 55 and a few at 65.

*Amount of Benefit*—With a single exception, the plans studied provide for pensions derived from past service and future service benefits. The company assumes the whole expense of providing past service benefits, which are granted to employes on the payroll at the time of the plan's adoption.

No two plans studied used exactly the same method of computing benefits (see accompanying table for details), but the benefits arrived at are frequently the same. To illustrate the workings of the past service-future service annuities, consider the hypothetical case of Bob Brown.

Bob went to work for one of the country's largest oil concerns on January 1, 1929, and began participating in the plan on January 1, 1939, his fortieth birthday. If his earnings amount to $200 per month until he reaches the age of 65, his monthly retirement income will be as follows:

Federal old-age insurance benefits based on estimated earnings from January 1, 1937, to January 1, 1964..$44.45.

Supplementary benefits provided by the employers for ten years of service prior to January 1, 1939, (this company provides 1½ percent fo average earnings for ten years preceding January 1, 1939, times 10) payable by the company or by trustee .....$30.00.

Supplementary benefits provided by equal employe and employer contributions (2 percent of first $3000 plus 5 percent of excess over $3000) for services from age 40 to 65, payable by the insurance carrier .....$25.67.

Total monthly retirement income at age 65 for a single male employe $100.12.

Wife's supplementary Federal old-age insurance benefits .....$22.23.

Total monthly retirement income at age 65 .....$122.35.

**Non-Contributory Plan**

In some of the plans the employe contributes nothing. One of the best of these has been established by a company whose employes receive 40 percent of their last five years' average pay after 20 years of service. This means a $3000-a-year-man can retire on $1200 a year.

This company also has a provident fund under which up to ten percent of an employe's salary can be deducted if he chooses, with the company matching his contributions dollar for dollar.

It is no coincidence, of course, that under the plans in which the employes do not contribute, it is stipulated that the employe must reach retirement age with 15 or more years of service in order to be eligible for full benefits.

*Maximum Pension*—Eleven out of 20 plans set no limit. Several others established $20,000 as the limit.

*Vesting of Employe Purchases*—Nearly all plans provide for the return of the employe's contributions if he resigns or is discharged. Many provide for vesting of the cash value if an employe has been in service for a specified number of years. It is also possible for the departing employe to take over all or part of the policy and continue to pay the premiums.

To illustrate this, return to the case of Frank Jones, who entered the employment of a major company on January 1, 1944, at the age of 30 and whose earnings will amount to $135 per month until age 35, $160 per month from 35 to 40, $185 per month from 40 to 45, $195 per month from 45 to 50 and $200 per months until he is 62, three years before normal retirement age. At this age Frank wants to retire. His employer consents and his retirement income is mathematically adjusted to provide constant total retirement income, including his monthly Federal Old Age benefit.

Assuming that prior to his employment with the company Frank earned $95 per month from age 23 to 25 and $110 per month from age 25 to 29. His monthly retirement income would be as follows:

| | From age 62 to 65 | From age 65 |
|---|---|---|
| Normal life annuity basis as mathematically reduced, payable by the insurance carrier | $15.87 | $15.87 |
| Temporary life annuity payable by the insurance carrier from age 62 to age 65 | $42.41 | ..... |
| Federal old age insurance benefits commencing at age 65 | ..... | *$42.41 |
| Constant total retirement income from age 62 | $58.28 | $58.28 |

If Frank does not wish to have his retirement income adjusted for federal old age benefits, his monthly retirement income would be as follows:

| | From age 62 to 65 | From age 65 |
|---|---|---|
| Normal life annuity under retirement plan, payable by the insurance carrier | $26.68 | $26.68 |
| Federal old age insurance benefits commencing at age 65 | ..... | *$42.41 |
| Total retirement income | $26.68 | $69.09 |

(*If wife were 65 or older and otherwise qualified, she would receive a wife's federal old-age insurance benefit of 50 percent of $42.41, or $21.21 a month.)

*Death Before Retirement*—Under group annuity plans if an employe dies before retirement, his beneficiary is paid a lump sum equivalent to his contributions, plus compound interest if the plan is on a "with interest" basis.

Under trust fund plans, the beneficiary of a deceased employe receives his contributions, and interest, often more.

**Additional Benefits**

Several companies have included in their plans certain unique features in addition to the usual benefits. One of these is the provision for employes when an oil field is abandoned.

As described by a company official, the problem is met as follows: "When an oil field is abandoned and a company has no formal annuity plan, the problem of what to do with many employes is very acute. The older men may be given pensions as a reward for their service in the field. However, there generally exists a group between 45 and 55 who have worked for 20 to 25 years in the field and who deserve special consideration, yet are not old enough to pension. The common procedure is a dismissal bonus. Under our group annuity plan, if it were necessary to abandon a field, each employe who has worked ten years or longer is treated exactly alike; viz., unless he withdraws his contributions, he receives a certificate entitling him to all of the annuities purchased by both himself and the company. If he has worked less than ten years he has his own annuities, and I might say that the company may, by special resolution, grant him the annuities purchased by the company. Of course, any employe who transfers to another field simply continues to purchase annuities. If, on the other hand, he prefers to take a job with another company which also has a pension plan of some sort, he simply increases the number of sources from which checks will be paid to him at age 65. We have found this a very helpful feature in view of the uncertainty of the length of the life of an oil field."

Warmly backed by organized labor, encouraged by tax benefits and the response of grateful employes, employers are making giant strides in guaranteeing a secure old age for American workers, and the oil companies are helping to lead the way.

## *January Demand Drops, Allowing Stocks Buildup*

Daily average production of crude increased in January by 61,000 barrels to 4,747,900 barrels, while demand for domestic crude dropped 68,300 barrels to 4,695,800 barrels, the lowest level since last August, permitting additions to stocks at the rate of 52,100 barrels daily after four months of steady withdrawals, the Bureau of Mines reported April 2.

Crude runs to stills averaged 4,680,000 barrels a day, 1000 barrels under December but 9 percent higher than January, 1944. January domestic production included 147,186,000 barrels of crude, 9,603,000 barrels of natural gasoline and 240,000 barrels of benzol.

No information was released regarding imports or demand for individual products, but January 31 stocks included 221,727,000 barrels of gasoline-bearing crude, 6,026,000 barrels of heavy crude in California, 4,160,000 barrels of natural gasoline and 234,625,000 barrels of refined products, a total of 466,548,000 barrels.

A slight rise in the price index for petroleum and products was shown by Bureau of Labor Statistics indices, to 64.3 in January compared with 63.8 in December and 63.5 in January, 1944. The crude capacity represented by the bureau's refinery data was 5,030,000 barrels, indicating an operating ratio of 93 percent against 90 percent in January, 1944, and 79 percent in that month in 1943.

## *Furnace-Type Carbon Black Plant Is Being Erected*

Continental Carbon Company is erecting a furnace-type carbon black plant capable of handling 15,000,000 feet of gas daily, with anticipated recovery of 8 pounds of carbon black per 1000 feet, in the Sunray-Dumas field, Moore County sector of the Texas Panhandle.

The new unit is adjacent to the firm's 70,000,000-cubic-foot daily capacity channel type plant, which is supplied with residue gas from the Shamrock Oil & Gas Corporation's McKee natural gasoline plant. The Continental Carbon Company is owned by the latter, Continental Oil Company and R. I. Wishnick of New York City.

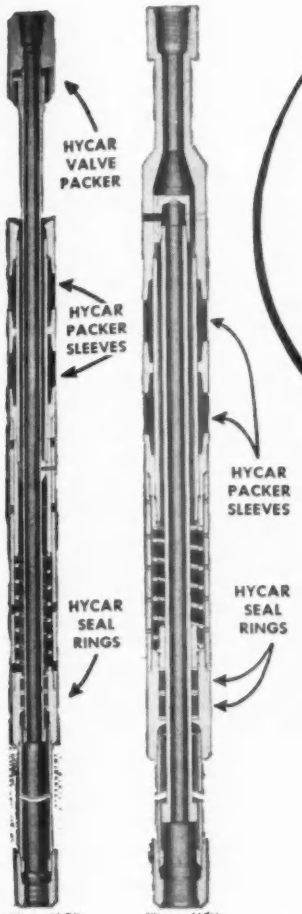
## *Water-Flood Permit Asked For West Edmond Field*

In an attempt to build up an artificial water drive and arrest declining bottom-hole pressures in the West Edmond pool of Central Oklahoma, 11 field operators have applied to the Oklahoma Corporation Commission for a permit to prosecute a water flood in the Canadian County sector.

Parties to the application include Peppers Refining Company, Skelly Oil Company, Sohio Petroleum Company, Stanolind Oil and Gas Company, Magnolia Petroleum Company, Mid-Continent Petroleum Corporation, Amerada Petroleum Corporation, Sinclair Prairie Oil Company, Anderson-Prichard Oil Corporation, F. G. and W. J. Fox, a co-partnership, and L. A. Chudacoff, independent operator.

The operators say bottom hole pressure of the field, which includes parts of Kingfisher, Logan, Oklahoma, and Canadian counties, has declined from approximately 3110 pounds per square inch initial bottom-hole pressure to an average of 2695 pounds per square inch.

# Dually completed wells protected by Hycar seals in Cameron packers




*Type "G" Circulating Anchor Packer* *Type "J" Cross-Over Packer*

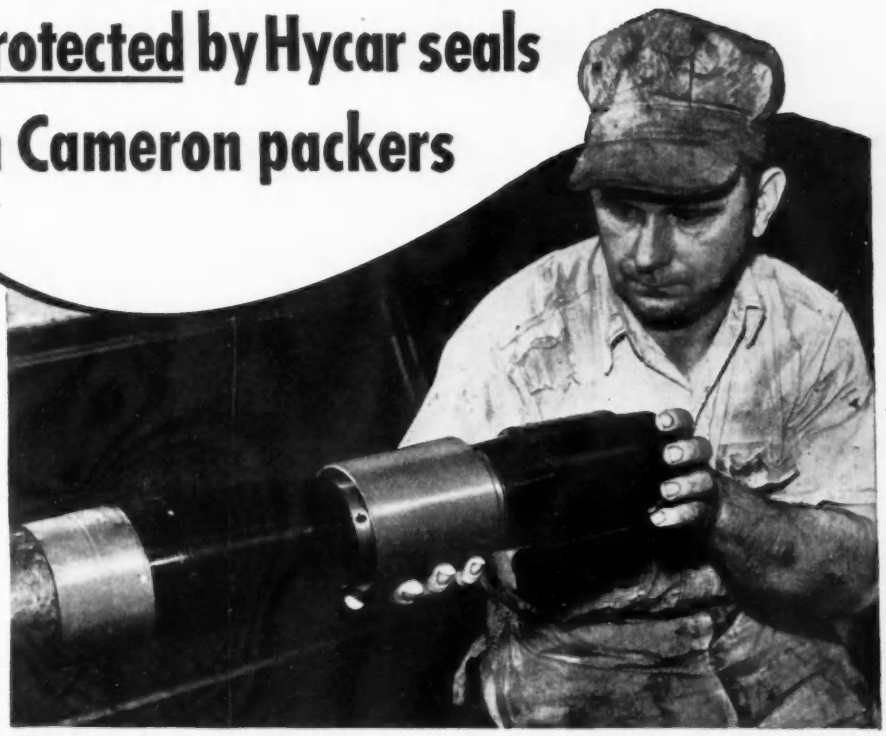


*Photo courtesy Cameron Iron Works* *Hycar Parts by Murray Rubber Co.*

FAILURE of the resilient sealing elements in production packers used for multi-zone well completion can cause at least two critical situations from which may arise additional serious trouble. For example, if the packing material fails to seal, or if it deteriorates after the well is completed, the oil string is exposed to high bottom hole pressures and, in a dually completed well, the fluids and gases from both producing zones will commingle. It all adds up to danger, lost time and needless expense.

To make sure that such failures don't occur, Cameron Iron Works equips both the type G Circulating Anchor Packer and the type J Cross-over Packer with Hycar packer sleeves, seal rings and packers (their locations can be seen in the cross sections). That's because Hycar's superb oil resistance prevents any distortion or deterioration; permits resilient Hycar parts to *stay* resilient even after prolonged exposure to oil, gases, high temperatures and high pressures.

Hycar's other important properties—shown in the box at the right—have helped make it practically the standard resilient material for oil field work. Hycar is being used for gate packers, mud line valves, casing head seals, blowout preventers, piston packers, scraper trap seals, gaskets and hose of all kinds and many other products where these properties are essential. Ask your supplier for parts made of Hycar to test and use in your own applications.

**FREE**—Write Department L-5 for your copy of "Everywhere in Industry", the new booklet describing Hycar's characteristics, with full technical data. *Hycar Chemical Company, Akron 8, Ohio.*

## WHAT HYCAR DOES IN OIL FIELD APPLICATIONS

1. *Resists oil and gas—even under high pressures and temperatures.*
2. *Resists action of abrasive-laden fluid under high pressure and at high velocity.*
3. *Wears at slow rate even under worst conditions.*
4. *Makes a positive, leak-proof seal, even after a long period of service.*
5. *Provides high elasticity.*
6. *Gives high tensile strength.*
7. *Has minimum tendency to cold flow and compression set.*

**Hycar**

*Reg. U. S. Pat. Off.*

LARGEST PRIVATE PRODUCER OF BUTADIENE TYPE

*Synthetic Rubbers*

# Illinois Limestone Successfully Water-Flooded

SUCCESS of The Pure Oil Company's experiments in water flooding the Clay City, Illinois, McClosky limestone reservoir as a means of secondary recovery is such that the company has already started two other projects and has a third under consideration.

It is still too early to estimate the increased recovery attributable to water flooding the McClosky limestone, but it is apparent that increases in the rate of production and ultimate recovery will more than justify the small expense. Twenty months have shown that wells with the greatest initial oil production and recovery by primary methods have recovered the most additional oil by water flooding.

### Mines Bureau Report

These developments are particularly noteworthy because they deal with water flooding of limestone reservoirs, whereas most water flooding has been applied to sandstone reservoirs. This may lead to water flooding of other limestone reservoirs, and may materially enlarge oil recoveries in many fields. The Bureau of Mines has prepared an extensive report on the water flooding of the McClosky limestone in the Clay City field, and the accompanying data have been digested from the Bureau's Report of Investigations 3792.

Discovered early in 1937, when Pure completed its first producer from McClosky at 2964 feet, as the first big producer in the Illinois Basin, development of the field was rapid. Eighty wells were completed in 1937, with developed area totaling 842 acres. By 1942 there were 711 producing wells proving an area of 13,600 acres. Greatest production was in 1939, when output of the field was 6,336,000 barrels from 369 wells, but production declines of individual wells were such that even with 342 additional wells, the field only produced 2,752,000 barrels in 1942. It was apparent that many wells would soon be abandoned unless some means of stimulating production was employed.

Pure, first to test intentional water flooding in any of the deeper basin fields, selected three producers as injection wells on the northwest side of the field for an experiment. The wells designated had penetrated comparatively thick and open producing zones. It was assumed that natural flooding action of an edge-water drive could be approximated by injecting more water into structurally low wells. Existing wells were used because of the depth to producing formation and the uncertainty of results.

Few wells in the field had been tested for porosity and permeability, but from available information the upper two or three feet of the first producing zone is the most permeable, ranging above 2000 millidarcys, while samples from the next four feet range from 100 to 1000 millidarcys. The upper part of the first producing zone is most permeable, probably yields the most oil, and is flushed most quickly by the injected water. Combined thickness of producing zones in the 52 wells in the vicinity of the injection wells ranges from six to 26 feet and averages 12.8 feet, but because of scarcity of information on porosity and permeability it is impossible to evaluate this thickness in terms of recoverable oil. Water zones are not continuous between wells and no uniform water level can be established. Many wells produce clean oil from zones at equal or greater depths than zones which yielded water in adjacent wells. Original pressure was supplied by dissolved gas but apparently the oil was undersaturated at original reservoir pressure.

### Acidizing Aid

The initial oil production of wells in the Clay City field ranged from a few barrels daily to over 100 barrels per hour after being treated with 4000 to 5000 gallons of acid. Pressures of 350 pounds per square inch or more were required initially to force the acid into the limestone, but approximately 30 minutes after the initial injection the pressures dropped, and the remainder of the acid entered the limestone by gravity.

The rate of oil production from most flowing wells declined 30 to 35 percent per month for the first six to eight months, and pumping equipment was required after four to eight months of flowing life. In May, 1944, all producing oil wells were being pumped.

Cumulative production from the McClosky zone through March, 1944, averaged about 2130 barrels per acre, but some prolific leases on the northwest flank of the structure have produced 4000 barrels per acre and 312 barrels per acre-foot (see Figure 1). Thirty-five wells in this area had averaged over 1500 barrels of oil per month from the time of completion through March, 1944.

During recent years upper producing zones have been opened in a few wells by multiple completions, and several wells in the McClosky limestone have been abandoned.

Pure's Clay City Banking Company 8, the first well selected for injection, was completed July 21, 1939, and had produced 84,465 barrels of oil to September 1, 1942. The average daily production was 5½ barrels of oil and two barrels of water when the well was converted to water injection on September 19, 1942. Water injection was begun in Pure's C. D. Duff A-3 on September 30, and in Pure's A. G. Stanford 4 on October 16, 1942. The average daily production of these wells was between two and three barrels when they were converted to water-injection wells. The total volume of water injected monthly into each of the three input wells, from September, 1942, to April 1, 1944, is shown in the table.

Water was obtained from the Little Wabash River, which flows along the east edge of the field. Turbidity and alkalinity of the river water varied greatly, depending on the rainfall. Before injection, the river water was allowed to settle in a pond and then was passed through a tubular carborundum filter.

The areal extent in June, 1943, and May, 1944, of water injected into the McClosky limestone was estimated as follows:

| | June, 1943 Acres | May, 1944 Acres |
|---|---|---|
| Vicinity of Pure's Clay City Banking Company 8.. | 158 | 304 |
| A. G. Stanford 4.. | 101 | 186 |
| C. D. Duff A-3.... | 145 | 229 |
| Total ..... | 404 | 719 |

### Increases In Production

The effects of water flooding were observed by study of production history of several groups of wells. The grouping was governed by the elapsed time between first water injection and the

**Monthly Oil and Water Production, Thousands of Barrels**

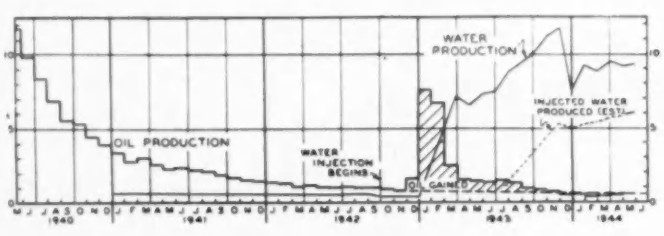



Figure 1. Production history of wells in group 1, first six wells in Clay City field to be affected by water injection.

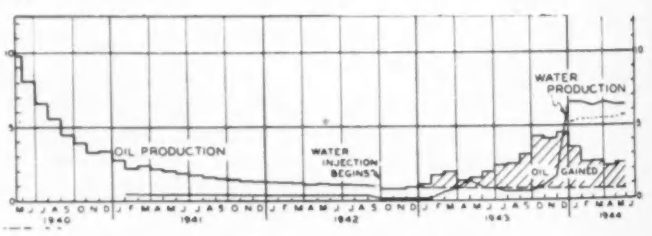



Figure 2. Production history of wells in group 2, six wells 1320 feet or more from injection wells affected within four months after injection started.

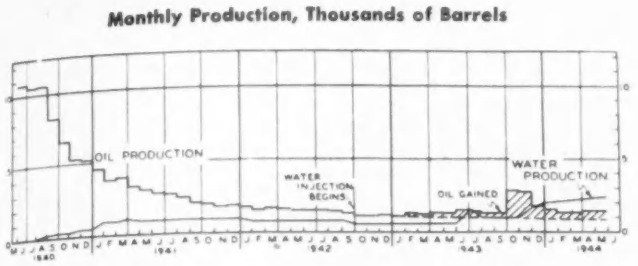



Figure 3. Production history of wells in Group 3, five north or south offset wells affected last by water injection.

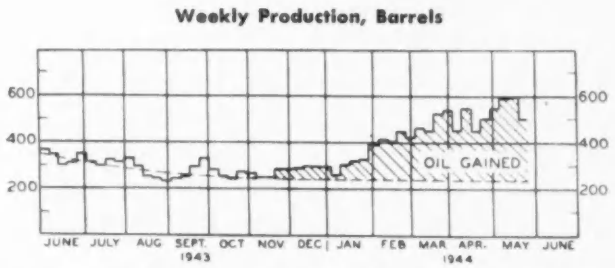



Figure 4. Recent production history of Wiser Oil Company, Daly lease, Clay City field, Illinois.

resultant increase in production, rather than by a particular surface pattern.

Increases in the rates of oil production from wells offsetting the input wells to the east and west were observed within three months after water injection began. The production history of the first six wells affected by water injection—Pure's Clay City Banking Company wells 5, 7, and 11, R. Hubble A-1, A. G. Stanford 2, and B. Travis B-4—is shown in Figure 4. Oil produced from this group had declined to 1075 barrels in September, 1942, when injection started, and dropped to 943 barrels in November. The monthly rate of oil production increased to 1689 barrels of oil in December and reached a maximum of 7671 barrels in January, 1943. A marked decrease in the rate of oil production was shown in March, 1943, and by December the montly oil production was only 539 barrels, or 100 barrels per month less than might have been expected by primary methods.

The total oil gained by water injection from this group to May 31, 1944, was 15,570 barrels, an average of 130 barrels per well per month during the 20 months following initial injection. Increased production was estimated from a normal decline curve to be equivalent to the quantity that would be produced during the 21 months between May, 1944, and March, 1946. It does not include the potential oil production lost by the conversion of the three oil wells to water injection wells.

### Production Rise

Monthly water production from this group increased from 484 barrels in September, 1942, to 9238 barrels in May, 1944. A maximum monthly rate of water production of 11,760 barrels was reached in November, 1943, when operation of Travis B-4 was discontinued.

It was estimated that injected water comprised approximately 1125 barrels (15 percent) of the monthly water production in June, 1943. A similar estimate for May, 1944, based on the specific gravity of the produced water, indicated that injected water comprised approximately 6029 barrels (65 percent of the total monthly water production). By that month two of the six wells in Group 1 had ceased operation because of water incursion, and a third well produced excessive quantities of water. Pure's Travis B-4 discontinued operation in December, 1943, and the offset well—Pure's B. Travis B-3—immediately showed an increase in monthly oil production that exceeded the combined monthly liquid (oil and water) production from Pure's B. Travis B-4.

The effect of water flooding on wells in Group 1 was spectacular, with large, rapid increases in the rate of oil production followed by equally rapid and large decreases in oil production and large increases in water production. When the six wells in Group 1 are abandoned, however, *the total oil recovered from them may be no greater than could have been expected by primary-recovery methods.* Gains by this group of wells resulting from water flooding will be measured in savings in interest on the investment and savings in operating cost, rather than in additional barrels of oil recovered from the reservoir.

Six wells . . . Pure's Clay City Banking Company 1 and 12, J. H. Holman 3, R. Hubble A-2, A. G. Stanford 3, and B. Travis B-3 . . . 1320 feet or more from the input wells, began to show increases in the rates of oil production approximately four months after water injection began. Production history of these wells (Group 2) is shown in Figure 5. The monthly production was 1006 barrels when water injection began, and declined to 916 barrels per month in December before water injection affected their rates of oil production. Monthly production from this group increased to 1155 barrels in January, 1943, and increased steadily to a maximum of 4566 barrels in December, 1943. The rate of oil production after December, 1943, declined somewhat, but the volume of 2496 barrels produced during May, 1944, was more than twice the monthly oil production before water injection, and three times the rate indicated by an extrapolation of the normal decline curve. The increased production to May 31, 1944, resulting from water flooding, was estimated at 31,826 barrels, or a monthly average of 265 barrels per well. The estimated potential oil production of the three injection wells has not been deducted from this total. This volume of oil is equivalent to the production indicated by a normal decline curve for the next 37 months, or to June, 1947. The natural decline in the rate of oil production for the Group 2 wells indicated that few could have been expected to produce oil economically for another 37 months by primary mthods.

It is estimated that wells in Group 2 produced 186 barrels of water in September, 1942, and 6572 barrels in May, 1944. The estimated production of 194 barrels of injected water (based on chloride concentration) from Group 2 wells in June, 1943, represented 24 percent of the total monthly water production, but the estimated production of 5534 barrels of injected water in May, 1944, was 84 percent of the total water production during that month.

The increased oil production from Group 2 wells was greater than from wells in Group 1, but the effect was less spectacular. As Group 2 wells had produced more oil by May, 1944, than could be expected by primary methods and were producing more oil per month than they produced three years before, it may be concluded that water flooding will result in a higher ultimate recovery than would have been achieved exclusively by primary methods.

### Third Group

A third group of five wells, offsetting input wells—Pure's Clay City Banking Company 9, J. H. Holman 1, Holmes Consolidated 3, G. L. Travis C-1, and Zoa Mosley 2—showed increases in production six to 17 months after water injection started (see Figure 6). Monthly production was 1428 barrels in September, 1942, and declined to 1297 barrels in May, 1943, before showing an in-

**TABLE 1**

**Volume of Water Injected Into Input Wells**

| MONTH | Into Clay City Banking Co. 8, (Barrels) | Into C. D. Duff A-3, (Barrels) | Into A. G. Stanford 4, (Barrels) | Total (Barrels) |
|---|---|---|---|---|
| September, 1942 | 11,042 | 559 | ..... | 11,601 |
| October | 25,569 | 24,460 | 4,895 | 54,924 |
| November | 31,845 | 32,307 | 10,885 | 75,037 |
| December | 60,553 | 46,600 | 39,796 | 146,949 |
| January, 1943 | 64,868 | 43,100 | 36,600 | 144,468 |
| February | 56,000 | 27,690 | 28,000 | 111,690 |
| March | 50,000 | 27,250 | 25,400 | 102,650 |
| April | 22,500 | 16,140 | 19,200 | 57,840 |
| May | 29,400 | 27,160 | 31,000 | 87,560 |
| June | 41,581 | 29,980 | 29,998 | 101,559 |
| July | 37,676 | 30,800 | 30,800 | 99,276 |
| August | 34,269 | 30,500 | 30,500 | 95,269 |
| September | 32,945 | 30,000 | 30,000 | 92,945 |
| October | 37,552 | 31,000 | 31,000 | 99,552 |
| November | 41,383 | 30,000 | 30,000 | 101,383 |
| December | 47,295 | 24,459 | 31,000 | 102,754 |
| January, 1944 | 38,421 | 23,710 | 31,000 | 93,131 |
| February | 34,524 | 19,390 | 29,000 | 82,914 |
| March | 36,905 | 32,290 | 31,000 | 100,195 |
| Total | 734,328 | 527,395 | 490,074 | 1,751,797 |

crease. Monthly production increased to a maximum of 2982 barrels in October, 1943, and declined thereafter. Monthly oil production was 1418 barrels in May, 1944, or approximately the same as before injection started and slightly above that which might have been expected by primary production. Some of the wells may yet show additional increases due to water flooding. Total to May, 1944, was 8557 barrels, less than 86 barrels per well per month. This gain is equivalent to oil production by primary production methods during the next 7½ months, or until the middle of January, 1945.

Estimated water production from Group 3 wells increased from 620 barrels per month in September, 1942, to 2046 barrels in May, 1944. From tests on produced water in June, 1943, it was estimated that injected water produced by these wells comprised 402 barrels or 37 percent of the total monthly water production from the Group 3 wells. Tests of water produced in May, 1944, indicated that production of injected water had increased to 863 barrels or 42 percent of the total volume of water produced that month.

### Increases Shown

Six wells on 113 acres surrounding Pure's Clay City Banking Company 8 began to show increases in the rate of oil production within five months after initial water injection, while seven wells on 91 acres surrounding Pure's Stanford 4 and 3 wells on 68 acres surrounding C. D. Duff A-3 were affected similarly. Twenty-eight wells on 552 acres had been affected by the three injection wells ten months after injection started, and by May 31, 1944—20 months after injection began—44 wells on 856 acres had been affected by water flooding.

A study of the subsurface conditions revealed that wells on the low parts of the structure, where the producing sections were thin and the oil recoveries (before water injection) were low, were the first to be affected by water flooding. Although structurally lower wells experienced the first increase from water flooding, wells higher on the structure showed the greatest gains to May, 1944. Producing wells offsetting input wells to the east showed greater increased oil production from water flooding than other wells. Thirty-eight wells gained more than 1000 barrels of oil, and 17 of those gained more than 2000 barrels. In comparing all affected wells it was noted that wells with highest initial oil production and greatest oil recovery by primary methods also recovered most additional oil by water flooding.

The total increased oil production to May 31, 1944, from 41 oil wells is estimated to be 87,935 barrels, or 102 barrels per acre. Potential oil production from the injection wells between the date of initial injection and May 31, 1944, has been deducted from this total. Recovery from all 44 wells by primary methods before water flooding started averaged 3660 barrels per acre.

Monthly oil production from a few wells declined sharply soon after water injection was begun and later increased slowly. These wells produced only small quantities of water with the oil, however, and could not have been "watered out." Decreased production would be accounted for by the following subsurface conditions:

1. As injected water displaces gas, oil, and water from the interstices of the producing formation, a bank or belt of gas under pressure above the existing formation pressure could be formed ahead of the oil and water front.

2. Gas under higher pressure in an area surrounding a well bore could prevent oil in lower pressure areas from moving toward the well.

3. During this static period, and until accumulated gas was dissipated, the gas-oil ratio of the well would be comparatively high and oil production low.

4. Because of favorable structural position or increased relative permeability to gas movements, one or two wells could produce a large part of the gas displaced by water injection.

No evidence is available to support these explanations because gas from the wells was not measured.

Latest production history of the Wiser Oil Company Daly lease, on the west edge of the Clay City field and near Pure's Clay City Banking Company 8 (injection well), is shown in Figure 7. This property contained eight wells, but only three had been affected definitely by water flooding by May 31, 1944. The eight wells produced about 1149 barrels of oil in November, 1943, before the rate of oil production increased. Late in November, Daly 4—west offset to "watered-out" Clay City Banking Company 11—began to show an increased rate of production. Daly 3 and 5 were not affected until February of this year. During May, 1944, monthly production from the eight wells reached a maximum of 2261 barrels, nearly twice that expected from the natural production decline curve. The total increased production to May 31, 1944, was estimated to be 5343 barrels, of which 2159 barrels may have been gained from well 4.

In May, 1944, water produced from Daly 4 showed some dilution due to input water, but injection water had not reached wells 3 and 5.

### Sharp Rise

The production history of 41 of Pure's wells, including the three wells converted to water-intake wells, is shown in Figure 8. These wells produced 8400 barrels of oil per month in August, 1942, before injection started. The graph shows two peaks following water injection . . . the first, 14,900 barrels in January, 1943, when wells in Group 1 reached a maximum; and another, 14,600 barrels in December, 1943, when wells farther from input wells were affected. The increased production by water flooding was 82,592 barrels. This increase is equivalent to the natural oil production for the 12 or 13 months from May, 1944, to June or July, 1945. Estimated water production increased from 3000 barrels in December to 22,847 barrels in May, 1944. Water produced by these wells in May, 1944, was less than one-fourth the volume of water injected, and the estimated 14,683 barrels of injected water produced in May, 1944, was less than 15 percent of the average volume of water injected monthly into the McClosky limestone.

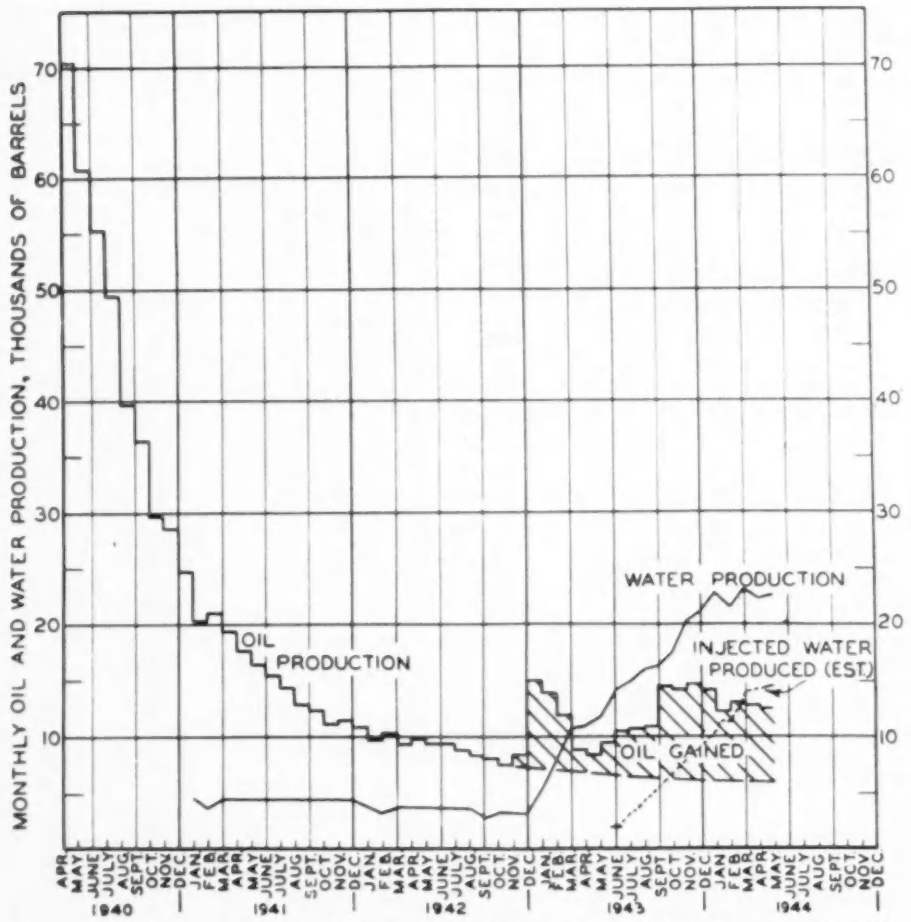

MONTHLY OIL AND WATER PRODUCTION, THOUSANDS OF BARRELS
70
60
50
40
30
20
10
WATER PRODUCTION
OIL PRODUCTION
INJECTED WATER PRODUCED (EST.)
OIL GAINED
APR MAY JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
1940
1941
1942
1943
1944

**Figure 5. Production history of all Pure wells affected by water injection to May 31, 1944, Clay City field, Illinois.**

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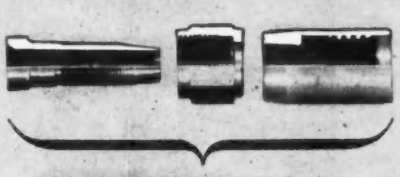
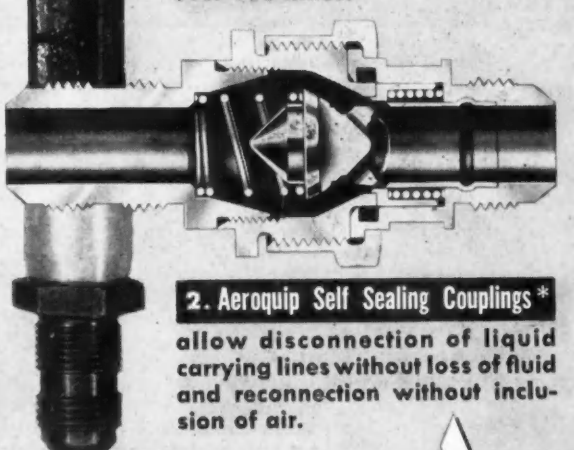
**1. Aeroquip Hose Lines*** with detachable and reusable fittings simplify the supply problem and save valuable time, thus helping our armed forces on all fronts.



**3 PIECES (each replaceable)**

Assembly without special tools. No tightening or adjustment after assembly. Fittings can be removed from hose and reused over 100 times.



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JACKSON, MICHIGAN, U. S. A.

# Prefabricated Foundations For Multiple-Engine Setup

## Simplicity and Flexibility Achieved

MANY and various types of foundations are used for the "spark plug" or "blitz" rigs used for drilling to depths within the 8000-foot range, with the trend generally toward the fabrication of a massive base on which the entire group of engines may be ranged. This plan simplifies the tie-in between power and driven equipment, but imposes on the transportation division the handling of a unit which is both heavy and unwieldy, and which requires ample room in which to be placed at the new location.

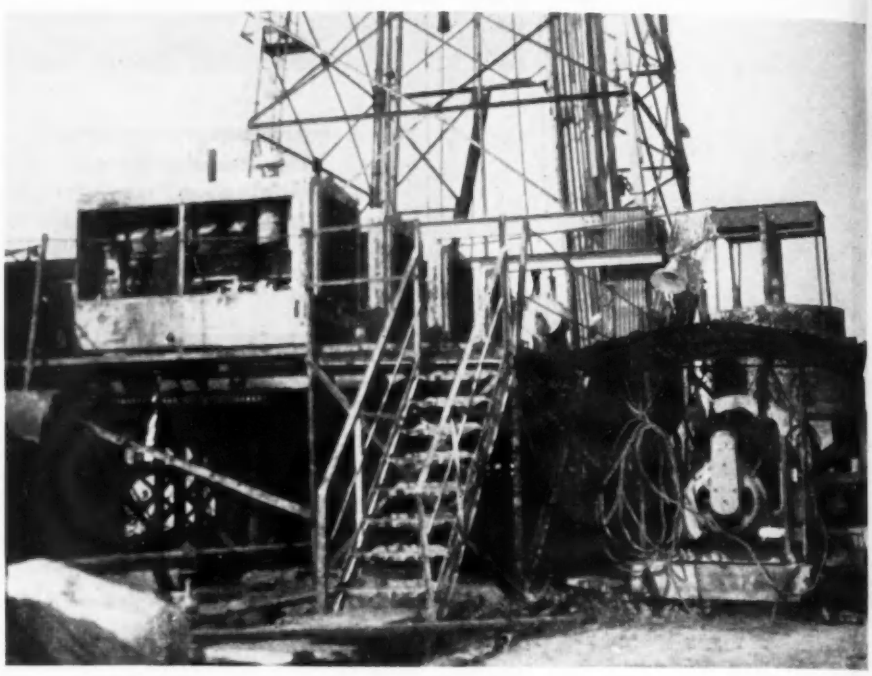
One Pacific Coast contractor, operating several strings of rotary tools and relying on diesel power, gets away from the drawbacks of the single, comprehensive base by fabricating its equal in a number of like sections which, ranged together and tied with I-beams overhead, offer the stability of the single piece, with the added advantage of being readily demountable and transportable on the truck along with other equipment.

The individual or unit section consists of paired channel bases, the ends turned upward through 30 degrees to provide skid shoe for easy sliding of the unit into position over the sub base or cribbing. These two channels are held rigidly as to spacing by means of channel spacers, welded to the skid members just behind the shoe section. These channels are inverted, with respect to the skid members, so as to afford a flat surface on which material can be stacked, if desired, and to afford good standing while aligning the overhead beams.

### Rectangle of Beams

On each skid, at the point where the spacer channels are welded in, the corner posts are welded in place. These corner posts are made from salvaged drill pipe, and cut to uniform length to afford the desired headroom over the skids before being placed. The pairs of posts on a common skid are capped with sections of channel, the flanges being turned downward to fit over the pipe and to afford a smooth upper surface. Between these longitudinal channels are welded a second pair of spacers, with the flat side uppermost, and with the outer flange of the spacer unit set flush with the outer end of the cap member. There is thus formed a rectangle of beams, all flat and leveled to a common height, which serves as base on which to set any desired equipment.

Cross braces, set in X-form between the posts, add rigidity to the structure and relieve the post welds of any but direct thrust. These braces are set to fall within the limits of the rectangle formed by the outside dimensions of the caps and spacers, so that they are protected from damage or impact when erected or racked on the truck for transportation. The ends of the diagonal braces are cut to fit within the flange of the beams, and are welded with a continuous bead to exclude water as well as to afford maximum security.



**This entire rig, including Diesel engine platform, drawworks, rotary table and pipe-racking floor, is supported on a series of the foundation units, distributed and arranged over the previously timber-matted area so that the degree of support obtained is proportioned directly to the load and service imposed. The units are tied together overhead by the stringer beams and members of the derrick floor assembly, while preserving maximum accessibility through the gaps bridged only by the tie beams.**

For the engine, drawworks and other derrick units, the sub base with but the four corner posts is used. For additional support and rigidity under the pipe-racking area, an extra set of posts is set on the skid members of the unit, midway between the corner posts, and the diagonal bracing is doubled to tie each pair of posts together.

### Unit Under Each Skid

These base units, as they may be designated, are slid into place on the timber or concrete sub base—depending upon ground-bearing conditions at the site—and ranged to provide any desired degree of support. For engine support the units are so set as to bring one directly under each engine skid, so as to eliminate spring or sag which might be introduced were the tie beams relied upon to provide maximum rigidity.

When placed according to load distribution, the foundation units are tied together with I-beam floor sills of the proper size and weight to support the superimposed load. These beams are held to the foundation units by bolts passing through beam flange and top channel of the base unit, or may be held against creep from operation vibration by lugs or stops welded to the beams at units so as to engage against the side of the flange of the base unit's upper channel member. These beams are placed to tie the base members together in the longer direction or dimension of the set-up, and are prevented from overturning sidewise by bolts or clamps attaching them to the skids or tie beams of the structure set upon them.

Since the overall dimensions of the

**Spaced to come directly below the battery of Diesel engines powering this rig, these standardized and unitized foundation members afford maximum support to the engines, yet are small and light enough to be transported readily without demanding all the space within the truck. The units, welded from salvaged pipe and short channel sections, are uniform in height and area, and are interchangeable under the overhead or stringer beams. The control, fuel and cooling system pipe lines are carried between stringer-beam flanges for uniformity and better protection.**

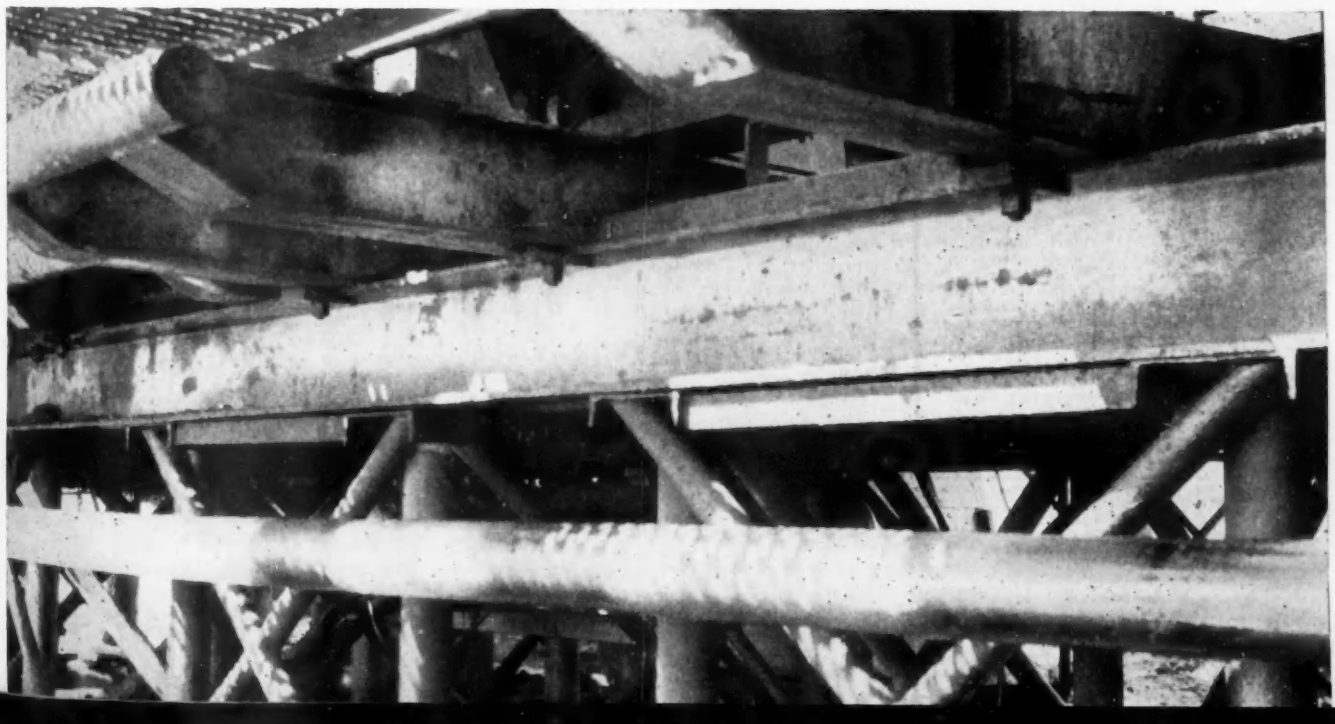
sub or foundation units are standardized, and all units are alike in top or working area, the engine skids are fitted with clamps which engage the web of the stringer beam and are pulled tightly up against it by means of a heel or spaced shim welded along the outer edge of the jaw member to provide flat bearing for the bolt or nut. The bolt holes through the webs of the engine skids are aligned with engine tie-down bolts so that a single through bolt can afford attachment for the engine through the intermediate skid to the stringer beam flange below. This construction gives greater rigidity that a fastening applied to the lower flange of the skid only, and is independent of and unaffected by any local deformation or denting of the skid member during transportation.

Ample inspection and working space between the foundation units is provided in the gaps between units, the plan of centering engines or other equipment directly over a base unit affording a maximum of accessibility to the sides of the skids and lower portions of the superimposed units.

### Units Interchangeable

One of the advantages of the standardized unit for rig and power-unit foundation is the interchangeability of units so that no predetermined sequence of arrivals is required to permit the crew to proceed with preparations for supporting the engines when they arrive at the new location. To preserve this interchangeability intact, no auxiliary equipment is attached to or forms a part of the unit. All piping, wiring and controls are kept above the top of the units, most of these accessories being contained within the span of the flanges of the I-beam used as stringer. By setting clips, U-bolts or clamps for the auxiliaries within the beam, it is necessary only to see that the beam is placed with the correct side outward and upward, to permit quick stringing of fuel and control lines after the bases are tied together by the stringer members. This supporting of these units within the I-beam flanges also contributes to the effective headroom below the engines by keeping the gaps between foundations clear of obstruction, as well as affording a greater measure of protection against accidental damage or vibrational stresses through the uniform support afforded within the span of the flanges.

**This view shows how the through bolts of the engine skids are utilized with clamp plates to hold the power units in place on the stringer beam. The dual stiffening effect of the diagonal braces through welding into the angle formed by web and flange of the channel beam is illustrated at the extreme right of the photograph.**



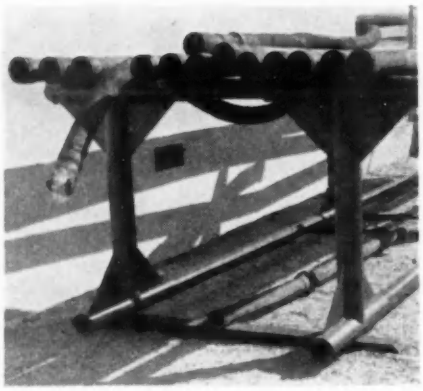
## Unitized Spacer Provides Built-In Bracing for Pipe Storage Rack

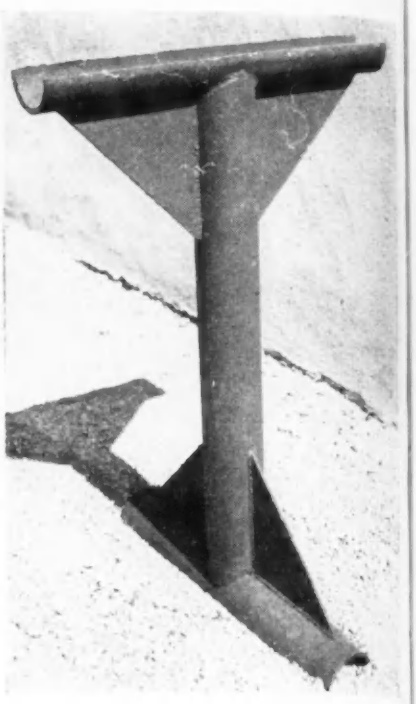
**PIPE RACKING**

Because great demands are being placed on oil producers, wells must be drilled as rapidly as possible. With many new high-powered rigs in action many man hours have already been cut from the average drilling time per well. Nevertheless much time is lost in moving drilling equipment from one location to another. One operator has unitized his equipment with this in mind and among the pieces so unitized the portable pipe rack illustrated has proven a most valuable time saver. Instead of setting up a new wooden pipe rack each time a new well is drilled or welding a makeshift steel pipe rack on pipes driven into the ground, this portable rack can be easily assembled or disassembled and has the added advantage of being 100 percent recoverable.

This all-steel rack has been so designed that it is extensible in two direction. Its simple construction and erection without bolts or welding makes for easy setting up and as no one piece weighs more than 100 pounds, roustabouts can assemble the rack without power equipment.

Six vertical pipe columns support the entire pipe load. These columns are made of heavy 4-inch pipe with suitable braces. The pipes are cut in 3-foot





lengths and have their ends mitered to make a snug fit with the pipe cradles welded to these ends. The pipe cradles or sockets are likewise made of heavy 4-inch pipe that has been split lengthwise with the cutting torch. These half sections are two feet long. They are welded to the pipe columns at right angles to one another. Strong triangular gussets of quarter-inch plate cut 10 inches on a side, have been welded two to the joint on each pipe stand. Each stand thus consists of a vertical pipe column and two half pipe cradles.

In erecting the pipe rack, two heavy 3-inch pipes are laid on the ground, spaced the desired distance apart. These pipes run lengthwise with the pipe to be placed on the rack. The 6 fabricated pipe columns are then spaced 3 to a side at equal distances. Three more pieces of 3-inch pipe are then laid on top of the pipe columns at the desired width. The pipe to be racked is then placed on top of these cross pipes.

Because all supporting members are held in place by the pipes laid on the ground the pipe is always kept in alignment. Sagging is also eliminated for this reason. In soft or swampy places, heavy boards are usually placed on the ground before the rack is assembled.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## Canvas Covers Enclose and Protect Tires Between Trips

**TIRE PROTECTION**

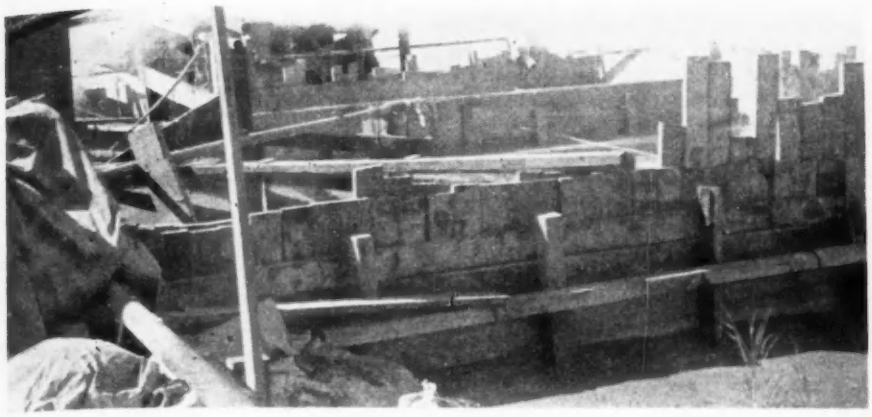
To safeguard the tires on a slim-hole drilling machine from damage by sunlight, heat and drilling waste during the time the unit is actually standing at a drilling site, one company has devised a set of covers which are easily placed, and which are found to extend appreciably the life of the tires. The covers are fabricated from canvas, sections from old tarpaulins being used when new material cannot be obtained.

The canvas is waterproofed after being fabricated, and is rendered mildewproof by any one of the several applications developed for use in protecting army tents against this type of damage. Covers are designed to cover the front (single) wheels as well as to enclose both pairs of tires on a dual wheel drive set-up. Grommets sewed to the canvas carry draw cords which enable the material to be drawn up snugly around the tires, so as to exclude dust and dirt as well as moisture and mud.

Canvas covers are more practicable than steel shelters on account of their portability, ease in application, and because they are not so readily adapted to pinch-hitting for other materials around the rig.

## DRILLING HINTS

### Timber Forms Mud Pit Walls for Service in Tidal Areas



**MUD PIT CONSTRUCTION**

Timber mud pits, in areas subject to tidal flow, can be built which will resist the entry of salt water and protect the mud from contamination. It is necessary only to observe certain precautions in erecting the walls of the pit to insure a structure which will resist the washing effect of the waves. If the first row of vertical members be driven into the sand as closely ranked as possible, and a second row be driven just inside the first, with joints overlapped by half the width of a board, a seal is quickly effected by drilling mud in these relatively narrow apertures and sea water entry is halted.

To give the structure strength against the bursting effect of the greater head of mud within the pit thus formed, horizontal stringers are laid to well above sea level, with vertical supporting members, of squared timber, driven at intervals of three or four feet behind the stringers. Then, crossing the pit area between the last rows of horizontal members, placed outside these vertical posts, wire line ties or rods with turnbuckles are set so as to absorb the pull between opposite sides.

Inner walls of timbers driven vertically provide for the various sections of the pit to allow settling, segregation of active and reserve mud stocks, and required jetting.

### Salvaged Exhaust Chamber Serves as Boiler Blow-Down

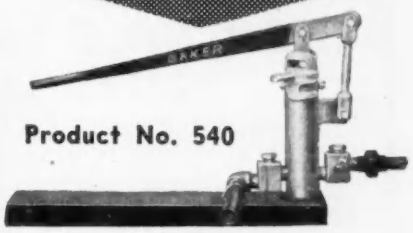
**BOILER ACCESSORY**

Boiler blowdown, especially in settled areas of communities or in the vicinity of compressor stations or other oil-field operations, can easily become a nuisance and may even lead to injury if provision is not made to muffle the effect of the blast of steam and curb its sudden roar.

One company, confronted by requirements for silencing and snubbing the blowdown from a battery of boilers, set up a receiver into which the line was tapped, with a stack which directed the resultant stream of steam upward. The body of the receiver was formed from a discarded exhaust chamber salvaged when the original heat-exchanger units were pulled from a compressor station. This unit, arranged for the exhaust to enter the cylindrical portion tangentially, carried its own baffles cast into the unit, so that it was necessary only to fit a plate into which the blowdown line could be tapped, and to erect over the central flange a stack of pipe long enough to carry the emerging column of steam high enough to be condensed before it could blow across neighboring properties.

The unit was mounted on pipe posts, set into the ground on the flange circle, with anchoring bolts down through the lower flange and into the supports so as to resist the overturning effect of the incoming steam and water. A drain, trap equipped, served for removing condensation and sludge from the base of the receiver.

It's the handiest thing you ever had in field or shop for *extracting*

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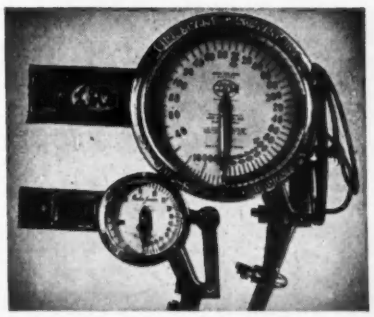

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THE POSITIVE LEAK PREVENTER



BE SURE TO CHECK THE

**TRADING POST SECTION**

ON PAGE 97 OF THIS ISSUE



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SIMPLE
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## Painted Horse of Light Timber With Reflector Blocks Roads

**HIGHWAY WARNING**

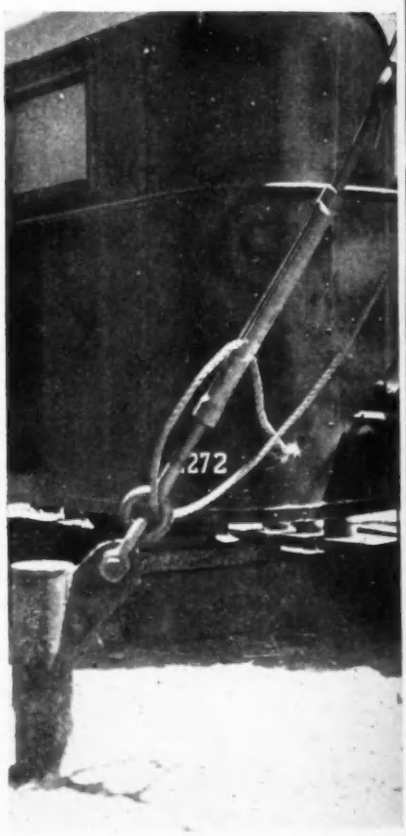
When crossings must be opened across lease roads or feeder highways, it is necessary to protect occasional traffic just as it is the more frequent users of the main roads—most of which are bored under, anyway. One pipe-line company uses a small self-supporting structure, made of 1x4's, and painted white. This warning carries, suspended from the top cross member, a red board on which is letter the word "STOP" in white capital letters, while below is suspended a large red reflector.

This sign is readily transported to the job, does not require a special footing, and is illuminated by lights of oncoming traffic in time for the warning to be effective.

When necessary, further protection may be insured by hanging a red lantern over the end of the horse or support nearer the center of the blocked roadway. A string tied around the lantern bail and behind the supporting member of the device, prevents the light from being blown down.

The light structure is not heavy enough to cause damage to motorized equipment if it is accidently struck, and usually will turn over without breaking unless hit directly in front. If set to protect an opening, there should be ample clearance behind the block to permit stopping or turning the vehicle after contact has given the necessary warning. Where it is desired to prevent overturning of the block by high winds it may be anchored by hanging a weight under the cross piece.

## Clevis Tab on Pipe Post Speeds Turnbuckle Attachment




**WIRE GUY ANCHOR**

Instead of excavating a pit in which to bury a deadman as guy anchor, one drilling contractor makes up anchor posts which are readily transferable, and which have sufficient holding power in good ground to be effective without reinforcement. The posts are made of 7-foot lengths of salvaged 3½-inch drill pipe, with the lower end formed to a spade point to facilitate driving. The upper end is capped with a section of heavy plate, welded in place with bead heavy enough to withstand driving as the unit is placed with a heavy maul, or with a tup lifted and dropped by the service truck winch line.

A lug is welded at one side of the post and carried an eye into which may be attached the clevis carrying the turnbuckle on the guy line, or which may be armed with a thimble to permit direct tying of the wire to the anchor.

***$5.00 is paid for each illustrated acceptable contribution. Mail to The Editor, THE OIL WEEKLY, P. O. Box 2608, Houston 1, Texas***

# Fuel Oil Stocks Increased as Crude Production and Refinery Runs Climb

Operations of the industry were at exceptionally high levels in the week ended April 14, with crude production setting a new all-time record and refinery runs back up close to the highest rate recorded. These operations resulted in substantial building up of stocks of both distillate fuel oil and residual fuel oil and in holding withdrawals from gasoline storage to a moderate rate for the spring season.

United States production of crude averaged 4,811,000 barrels daily during the week, up 28,000 from the week before and 379,000 a day of 8.6 percent above output in the corresponding week last year when the average was 4,432,000 a day. Crude runs to stills averaged 4,770,000 barrels per day, up 84,000 from the week before and 276,000 a day of 6.1 percent above runs in the like week last year, which had averaged 4,494,000 daily. The runs were within 33,000 barrels a day of the highest on record. Crude oil stocks totaled 220,871,000 barrels on April 7, having been cut down during the week ended on that date by 416,000 barrels daily. That heavy withdrawal lowered the crude inventory within 2,000,000 barrels of the early-March level of 218,675,000 barrels which was a 23-year low.

Production of gasoline in the United States, including natural blended at refineries, averaged 2,039,000 barrels daily in the April 14 week, up 4000 from the week before and 84,000 a day or 4.3 percent more than production in the comparable week a year ago. Stocks were drawn down by 86,000 barrels daily, as inventories of finished and unfinished gasoline declined to 97,410,000 barrels. That amount was 9,649,000 barrels or 11 percent more than the 87,761,000 barrels held April 15, 1944. The week's reduction in stocks involved both civilian and military grades. Civilian grade gasoline in storage April 14 totaled 52,485,000 barrels, off from 52,688,000 (revised) a week earlier; the new total having been nearly 1½ million barrels above the 51,013,000 barrels held a year ago. Military and other grades of gasoline in storage April 14 amounted to 44,925,000 barrels, having been reduced within the week from 45,327,000 barrels, and the new total having compared with 36,748,000 barrels a year ago.

Gasoil and distillate fuel oil production of 715,000 barrels daily was 73,000 a day more than in the previous week and 47,000 a day or 7.1 percent more than in the corresponding week last year. Stocks accumulated at the rate of 121,000 barrels daily, having risen to 27,886,000 barrels, but that amount was 2,186,000 barrels or 7.3 percent less than the 30,072,000 barrels held April 15 last year. These figures emphasize the warnings from Washington that scarcity of heating oils for civilian consumers will continue indefinitely.

Residual fuel oil production of 1,305,000 barrels daily was 32,000 a day less than in the previous week although 22,000 a day or 1.7 percent more than in the corresponding week last year. It was possible, however, to add 31,000 barrels per day to storage, following the long-sustained withdrawals of the past, through which inventories were cut to to the lowest level since World War I times. The April 14 total on hand was 41,538,000 barrels. That quantity was 10,608,000 barrels or 20 percent less than the 52,146,000 barrels reported as of April 15 last year.

## Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

**(All figures in thousands of barrels—add 000)**

**HIGHS AND LOWS OF RECENT YEARS**

| ITEM | Crude Oil Prod. Barrels Daily | Crude Oil Prod. Week Ended | Runs to Stills Barrels Dai'y | Runs to Stills Week Ended | Crude Stocks Barrels | Crude Stocks Week Ended | Gasoline Stocks Barrels | Gasoline Stocks Week Ended | Gasoil and Distillate Stocks Barrels | Gasoil and Distillate Stocks Week Ended | Residual Fuel Oil Stocks Barrels | Residual Fuel Oil Stocks Week Ended |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Highs:** | | | | | | | | | | | | |
| 1941 | 4,337 | 11–22 | 4,120 | 10–18 | 266,187 | 3–29 | 99,727 | 3–29 | [1]54,983 | 11–15 | 102,448 | 1– 4 |
| 1942 | 4,337 | 2– 7 | 3,961 | 1– 3 | 263,208 | 3–28 | [1]109,281 | 3–14 | 47,861 | 11–14 | 95,857 | 1– 3 |
| 1943 | 4,436 | 11–13 | 4,331 | 12– 4 | 245,752 | 5–29 | 94,159 | 3–20 | 47,187 | 11–27 | 72,881 | 1– 2 |
| 1944 | 4,762 | 9–30 | 4,798 | 12–30 | 240,992 | 1– 1 | 89,162 | 4– 1 | 48,863 | 10–28 | 64,744 | 10– 7 |
| 1945 | [4]4,811 | 4–14 | [4]4,803 | 2–24 | 223,782 | 4– 7 | 99,012 | 3–24 | 38,298 | 1– 6 | 56,074 | 1– 6 |
| **Lows:** | | | | | | | | | | | | |
| 1939 | [3]1,601 | 8–26 | 3,125 | 2–18 | [2]229,127 | 10–12 | 71,152 | 10– 7 | 20,722 | 4–15 | 105,397 | 4– 8 |
| 1941 | 3,364 | 1–11 | 3,490 | 1–18 | 240,399 | 11–15 | 79,923 | 10– 4 | 28,382 | 4–12 | 90,914 | 7–12 |
| 1942 | 3,297 | 7– 4 | 3,393 | 5–23 | 231,896 | 12–12 | 75,934 | 12– 5 | 29,240 | 4–25 | 72,962 | 12–26 |
| 1943 | 3,821 | 1– 9 | 3,579 | 3–13 | 232,191 | 1– 9 | 68,182 | 10–16 | 30,732 | 4– 3 | 57,596 | 12–25 |
| 1944 | 4,357 | 1– 1 | 4,228 | 2–12 | 220,258 | 9– 9 | 76,302 | 1– 1 | 30,232 | 4–19 | 49,737 | 3–18 |
| 1945 | 4,678 | 1– 6 | 4,656 | 1– 6 | [5]218,675 | 3– 3 | 86,616 | 1– 6 | 26,483 | 3–17 | 41,320 | 4– 7 |

**TRENDS OF 1944 AND 1945**

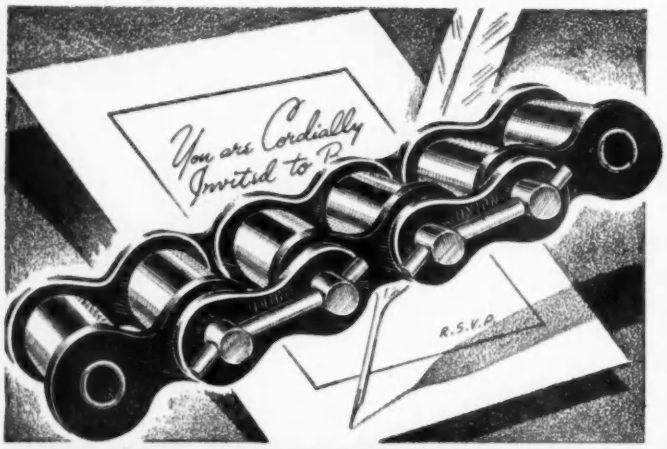
| Trends in Week Ended: | Crude Oil Production Daily | Crude Oil Runs to Stills Daily | Crude Oil Stocks Week End | Gasoline Production Weekly | Gasoline Stocks Week End | Gasoil and Distillate Production Weekly | Gasoil and Distillate Stocks Week End | Residual Fuel Production Weekly | Residual Fuel Stocks Week End |
|---|---|---|---|---|---|---|---|---|---|
| **1944:** | | | | | | | | | |
| January 1 | 4,357 | 4,453 | 240,992 | 13,192 | 76,302 | 4,575 | 42,310 | 9,141 | 57,330 |
| January 29 | 4,409 | 4,359 | 240,251 | 13,427 | 81,075 | 4,054 | 37,266 | 8,889 | 52,857 |
| February 26 | 4,423 | 4,377 | 237,137 | 13,183 | 85,248 | 4,558 | 33,766 | 8,952 | 51,387 |
| March 25 | 4,385 | 4,443 | 236,285 | 13,362 | 87,287 | 4,979 | 31,319 | 9,013 | 51,669 |
| April 1 | 4,383 | 4,435 | 234,667 | 13,824 | 89,162 | 4,450 | 30,530 | 8,367 | 51,326 |
| April 29 | 4,431 | 4,300 | 235,342 | 13,126 | 88,342 | 4,284 | 30,236 | 8,398 | 49,985 |
| May 27 | 4,514 | 4,532 | 234,423 | 13,502 | 86,468 | 4,702 | 32,035 | 8,568 | 49,812 |
| July 1 | 4,587 | 4,638 | 228,860 | 14,052 | 83,559 | 4,496 | 35,360 | 8,872 | 52,235 |
| July 29 | 4,608 | 4,627 | 225,112 | 14,115 | 82,665 | 4,833 | 38,135 | 8,900 | 56,280 |
| August 26 | 4,667 | 4,698 | 222,931 | 14,112 | 80,740 | 4,566 | 41,453 | 8,680 | 59,839 |
| September 30 | 4,762 | 4,775 | 222,393 | 14,494 | 78,028 | 4,622 | 45,329 | 9,292 | 64,226 |
| October 28 | 4,740 | 4,658 | 223,235 | 14,117 | 79,058 | 4,772 | 48,705 | 8,985 | 64,382 |
| December 2 | 4,712 | 4,693 | 221,591 | 14,853 | 80,427 | 4,082 | 45,832 | 8,981 | 61,727 |
| December 9 | 4,704 | 4,552 | 220,258 | 14,611 | 80,880 | 4,056 | 44,436 | 8,923 | 60,458 |
| December 16 | 4,695 | 4,537 | 222,075 | 14,145 | 82,747 | 4,353 | 42,413 | 8,727 | 59,280 |
| December 23 | 4,729 | 4,682 | 222,575 | 14,635 | 83,355 | 4,605 | 40,846 | 8,798 | 58,509 |
| December 30 | 4,705 | 4,798 | 222,998 | 15,342 | 86,614 | 4,257 | 39,495 | 9,156 | 57,430 |
| **1945:** | | | | | | | | | |
| January 27 | 4,727 | 4,756 | 221,310 | 14,957 | 88,223 | 4,843 | 33,651 | 9,252 | 51,119 |
| February 24 | 4,777 | [4]4,803 | 219,351 | 15,500 | 95,972 | 4,958 | 28,753 | 9,084 | 46,713 |
| March 3 | 4,765 | 4,753 | [5]218,675 | 14,704 | 97,603 | 5,026 | 28,110 | 8,728 | 45,021 |
| March 10 | 4,768 | 4,777 | 218,760 | 14,557 | 97,310 | 4,887 | 27,001 | 9,752 | 44,150 |
| March 17 | 4,774 | 4,773 | 219,486 | 14,481 | 98,882 | 4,527 | 26,483 | 9,042 | 43,718 |
| March 24 | 4,782 | 4,742 | 221,227 | 14,907 | 99,012 | 4,448 | 26,782 | 9,166 | 43,327 |
| March 31 | 4,781 | 4,677 | 223,782 | 14,644 | 98,758 | 4,548 | 26,889 | 9,184 | 41,745 |
| April 7 | 4,783 | 4,686 | 220,871 | 14,244 | 98,015 | 4,493 | 27,037 | 9,359 | 41,320 |
| **April 14 1945** | **[4]4,811** | **4,770** | | **14,270** | **97,410** | **5,006** | **27,886** | **9,137** | **41,538** |
| April 15, 1945 | 4,432 | 4,494 | [5]234,172 | 13,682 | 87,761 | 4,675 | 30,072 | 8,982 | 52,146 |
| **Change:** | | | | | | | | | |
| In week | +28 | +84 | —2,911 | +26 | —605 | +513 | +849 | —222 | +218 |
| In year | +379 | +276 | —13,301 | +588 | +9,649 | +331 | —2,186 | +155 | —10,608 |
| In year | +8.6% | +6.1% | —5.5% | +4.3% | +11.0% | +7.1% | —7.3% | +1.7% | —20.3% |

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, April 8, 1944.

## Tulsa Engineers Elect

Charles V. Millikan, chief engineer, Amerada Petroleum Corporation, was elected president of the Engineers Club of Tulsa, succeeding W. A. Melton, who becomes a member of the board of directors.

Other officers include T. D. Williamson of T. D. Williamson, Inc., vice president; Lloyd T. Gibbs of L. T. Gibbs Company, treasurer; E. M. Newland, Oklahoma Steel Castings Company, vice president in charge of entertainment; Charles B. Gannaway, Jr., plant manager, Tulsa Boiler and Machinery Company, vice president in charge of membership; William R. Wooten, assistant engineer for the city of Tulsa, vice president in charge of programs; D. Clayton Arnold, petroleum engineer, vice president in charge of public relations.

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A. P. I. No. 4 P Union *Toolpusher* No. 1240-RXX
A. P. I. No. 4 P Union *Driller* No. 1240-R 4
A. P. I. No. 4 C Union *Roughneck* No. 1240-RX
A. P. I. No. 3 P Union *Toolpusher* No. 1190-RXX
A. P. I. No. 3 P Union *Driller* No. 1190-R 3
A. P. I. No. 3 C Union *Roughneck* No. 1190-RXS

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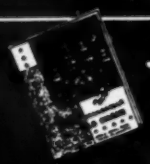

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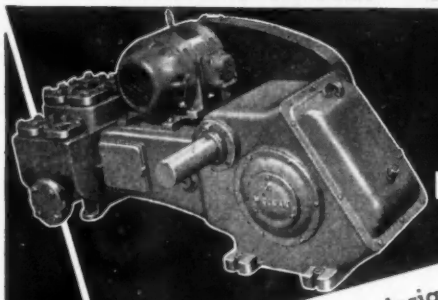

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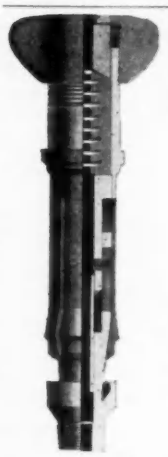

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## FPC to Open Hearings On Texas-Louisiana Project

Postponed hearings on the application of the United Gas Pipe Line Company for authority to build a 142-mile, 24-inch pipe line from the Carthage field, Texas, to Ouachita Parish, Louisiana, will open before the Federal Power Commission April 23.

The hearings, originally set for March 26, were postponed twice, the last time in order that testimony on a Tennessee Gas and Transmission application for additional facilities to increase natural gas deliveries into the Appalachian area might be completed.

The United project would link up with the Tennessee line and provide an additional supply of 100,000,000 cubic feet daily for the latter's pending project as well as provide additional gas for United to serve major customers now receiving gas from the Monroe field, Louisiana. Ultimate capacity of the proposed line would be some 300,000,000 cubic feet daily.

## Gulf Building Outlet For Bully Camp Field

Construction is under way on Gulf Refining Company's pipe line from the Bully Camp field, Lafourche Parish, Louisiana coast, to the intercoastal canal at Larose.

This 6½-mile, 4-inch line will furnish the first pipe line outlet for the Bully Camp field. Heretofore, the oil has been transported out of the field by barges. Gulf will build a barge loading terminal at Larose.

Sharman & Allen of Houston have the contract.

## South Plains Firm Plans Slaughter Field Line

The South Plains Pipe Line Company, Levelland, Texas, has authorized the construction of a 16-mile, 4-inch pipe line extension from its Slaughter field system to the Northwest Slaughter, or Whiteface area, Cochran County.

The company supplies crude to the refinery at Levelland, and also is a feeder to the Stanolind Pipe Line Company and The Texas-New Mexico Pipe Line Company's trunk lines. Connections will be given 17 leases with an allowable of 1220 barrels daily, thereby eliminating the use of tank trucks.

## Application Modified for Steamboat Buttes Line

The Toronto Pipeline Company has modified its application for construction of an oil pipe line outlet for the Steamboat Buttes, Wyoming, field which has been submitted for approval with date of hearing set for May 11.

The plan calls for lines from the Pilot Butte, Maverick Springs, Circle Ridge and Winkleman oil pools to Steamboat Buttes where they will enter a proposed 8-inch line east from Steamboat to a point 17 miles north of Riverton, Wyoming.

At this point a 6-inch line is proposed to the Husky Refining Company plant terminus at Riverton. After the war, the 8-inch junction with the 6-inch, 17-mile line north of Riverton may be extended east to Lost Cabin to join Stanolind Oil and Gas Company's main 12-inch trunk line.

## Big Inch Undamaged by Floods, PAW Declares

The Big Inch line was undamaged by recent floods, it was announced in Washington by The Petroleum Administration for War.

The agency declared that daily operation reports show pumpings were maintained at a consistently high level during the period of high water.

## Indiana-Ohio Line to Be Laid by Tulsa Contractor

Midwestern Engineers, Tulsa, were awarded a contract by Panhandle Eastern Pipe Line Company to lay 32 miles of 24-inch loop line from a point northeast of Zionsville, Indiana, to Maumee, Ohio.

The project will get under way about June 1 and the loop is along the company's main gas line to Detroit. At the same time the company was awarded a contract by Cities Service Gas Company to take up 12 miles of 4, 8, and 12-inch gas line for reconditioning in the Hominy, Oklahoma, area.

## Natural Gasoline Reaches New High During January

Daily average production of natural gasoline and allied products reached a new high in January at 13,011,000 gallons as a result of a 22 percent increase in Texas Panhandle output and eleven percent in California, the latter due to the inclusion of condensate, it was reported last week by the Bureau of Mines.

Figures on production of light products were further refined by the bureau beginning with January, as follows:

Natural gasoline, 177,932,000 gallons, natural gasoline mixtures, 28,015,000 gallons and raw condensate, 42,513,000 gallons, against 181,062,000 gallons for all three in December; commercial butane-propane mixture, 31,135,000 gallons; normal butane, 39,464,000 gallons, propane, 21,878,000 gallons, other liquefied petroleum gas mixtures, 11,734,000 gallons, against 100,338,000 gallons for all four; iso-butane, 15,868,000 gallons; iso-pentane, 13,237,000 gallons, against 17,136,000 gallons for both; finished gasoline and naphtha, 18,552,000 gallons and other products, 3,014,000 gallons, with no comparable figures.

The bureau reported that stocks declined 12,209,000 gallons during the month, those at refineries dropping from 98,574,000 to 89,292,000 gallons and those at plants and terminals from 88,368,000 to 85,441,000 gallons.

## Magnolia Awards Contract To Recondition Two Lines

Magnolia Pipe Line Company has awarded a contract to the Oklahoma Contracting Company for the reconditioning and welding of two 8-inch units in its Mid-Continent system between Alvord and Fort Worth stations. Twelve miles of each unit,extending south from Alvord, will be stripped of the coupled and threaded ends when replaced.

## Texas Natural Gas Tax Measure is Defeated

The Revenue and Taxation Committee of the Texas House last week killed a bill proposing to tax the gathering of natural gas at a rate of 1 cent per 1000 cubic feet.

Originally set up as a 5 cent tax per 1000 cubic feet, the bill was earlier revised to 1 cent. Sponsors said it would raise $19,000,000 a year for the general fund and roads and schools.

## TGT Financing Plan Is Submitted to SEC

Tennessee Gas and Transmission Company has filed with SEC a registration statement proposing a $57½-million financing plan including $15 million bank loan, $35 million first mortgage bonds and $7½ million 5 percent preferred stock. Since January 1, TGT has been averaging more than 205 million cubic feet daily in its line from the Corpus Christi, Texas, vicinity to the Appalachian area.

## Hugoton Allowables Fixed

Gas producers in the Hugoton field will produce 221,470,000 cubic feet a day during April and 217,409,000 cubic feet a day during May, according to an allocation order issued by the Oklahoma Corporation Commission. The order also fixed daily gas withdrawals from the Medrano sand in the Cement gas pool of Caddo County at 23,626,000 cubic feet for April and May, and 42,500,000 cubic feet for April and 33,065,000 cubic feet for May from the Lower Charlson sand of the Chickasha gas field of Grady County.

## Suggestion Awards Made

Awards totaling $350 will be presented by Cities Service Oil Company to Oscar Ledbetter and Lewis Scott of Ponca City, and Earl Y. Palmer of Holdenville, Oklahoma, in recognition of outstanding suggestions submitted in 1944 for improvement of company operations and earnings. The suggestions which applied to refinery and chemical operations were selected from a large number submitted by employes during the year in 26 states and Canada. Awards averaging $18.30 per suggestion accepted were paid out in war bonds and stamps.

# Shell Mara Strike Revives Interest In Northwestern Zulia, Venezuela

During recent weeks a number of companies have evidenced new interest in the producing possibilities of the district of Mara, in extreme northwest Zulia, Venezuela. Until a few weeks ago no important discoveries had been made in the area since 1925, when the La Paz and Concepcion fields were opened by Royal Dutch Shell interests.

Early in March, the Caribbean Petroleum Company (Shell) completed a wildcat at the DM 2 location, 23 kilometers north of the La Paz field, that is definitely to be classed as a major strike. Although no details have yet been released concerning this well, it is known to have been brought in at a big choke initial of approximately 10,000 barrels per day of 28-gravity oil.

### Pooled Venture

The well was drilled on Shell concession property, but was a pooled interest venture in which Creole Petroleum Corporation and The Texas Company participated on the strength of large holdings in the surrounding area. Subsidiaries of Gulf Oil Corporation and The Pure Oil Company are the other major concessionaires of the Mara district.

The successful outcome of the DM 2 well is certain to result not only in the immediate development of surrounding acerage but intensive wildcatting in all directions, with the Cretaceous limestone pay section as the drilling objective. The play will extend northwest across the Venezuela-Colombia boundary into Goajira. Shell, Tropical Oil Company and Standard Oil Company of California interests have filed bids for concessions south and southwest of Uribia, across the line and as much as 60 kilometers distant from the DM 2 well. There is likelihood that the Cretaceous limestone section is oil-bearing on either side of the Sierra de Perija range, and perhaps across the top of the undenuded extension of the range to the northeast of its abrupt surface termination.

Since the Cretaceous pay section proved in the DM 2 well becomes progressively more shallow toward the west, it is reasonable to believe that it is the reservoir source of the many surface seepages and asphalt lakes that inspired early drilling exploration in western Mara. This would also explain the occurrence of very heavy oil in sub-commercial quantity in the old Netick field of The Pure Oil Company. Pure has erected derrick for a Cretaceous test 12 kilometers north of Netick.

### New Test

At the end of March the Caribbean Petroleum Company was reported to be ready to spud at the DM 3 location, immediately south of the DM 2 discovery well. The DM 1 location was 6 kilometers southeast, on a parallel structural closure. The latter location was drilled and completed early last fall, resulting in a gas well that has since remained capped. Depth of the hole was approximately 6000 feet, which would indicate it was not deep enough to reach the pay section tapped in DM 2 at a somewhat greater depth and a little way up dip regionally. Deepening of DM 1, therefore, appears to be a likely prospect.

No company spokesmen have stated whether or not the joint interest arrangement of Shell-Creole-Texas will continue during the period of further drilling exploration, development and operation of proved properties, but it is assumed that this will be the case.

## British Firm Acquires Oil Rights In Trinidad

National Mining Corporation, Ltd., a British firm, has acquired drilling and production rights covering 24,516 acres of potential oil lands in the producing area of southern Trinidad, and plans exploratory drilling and development when equipment and materials are available. The company is already engaged in geophysical and subsurface studies.

More than three-fourths of the acreage represents government leasehold tracts surrendered during the war by other operators. Of the remainder, 1285 acres are freehold tracts subject to 20 percent net profit royalty, and 4331 acres of private property on which leasing options will be taken up on or before the end of June.

## Oil Exploration Slated For Spanish Morocco

The government-controlled Spanish National Institute of Industries has acquired exploration and development rights formerly held by a Belgian syndicate in the western half of Spanish Morocco. Immediate attempts will be made to locate commercial oil supplies adjacent to the Bon Dra producing district, just across the border in French Morocco, where a Cretaceous oil-bearing section has been partially developed beneath a cover of Tertiary beds that thickens to the north and west where the Spanish test wells will be drilled.

## Russian Turkestan Has New Gas-Distillate Field

The Sredazneft Oil Combine, in charge of petroleum operations in Russian Turkestan, has announced the discovery of a new high-yield gas distillate field at Palvan Tash, near the industrial metropolis of Tashkent. The discovery well was completed in December in a Triassic pay that may later be found to correspond with the pay section at Wu Su in nearby Sinkiang Province, China, where Russian engineers developed and abandoned a high gravity field nearly seven years ago.

A similar high-gravity field at Andijan, 130 miles east of Tashkent, was opened in 1942, and is now reported to have 12 producing wells. These developments indicate that important activity is underway in Russian territory adjacent to the Tien Shan mountain area, along trends extending east and west in the basins between the ranges. A thick Paleozoic section that is present in these basins has apparently not yet been explored.

## Ecuador's Production Up 25 Percent in 1944

Official figures on 1944 petroleum production, released by the government of Ecuador, show a 25 percent increase in total national output over the previous year, from 2,301,300 barrels in 1943, to 2,892,112 barrels in 1944, with a corresponding increase in refined products output.

## Poland's Gasoline Supplies Greater Than Before War

The Lublin government of Poland declares the current production capacity of liquid motor fuels is "several times as great" as in 1939. This is because crude oil and refining facilities, expanded during the German occupation, have been recovered in good operating condition but mostly because of the capture of the huge, German-built synthetic oil and rubber plant at Oswiecim, which is rated as being capable of producing more than 1000 barrels of gasoline per day, according to Russian engineers now supervising the operation of the plant.

## Second Producer Complete In Punjab, India, Field

Attock Oil Company, a subsidiary of Burmah Oil Company, has completed its second producing well in the Joya Mair field, northwest Punjab, India, discovered in May, 1944. Both wells in the Joya Mair field are shut in pending special arrangements that must be made for refining the heavy, black oil and which cannot be processed in the Rawalpindi refinery. This plant is supplied by a 52-mile pipe line from the Dhulian and Khaur fields, operated by the Attock Company, and handles an average daily throughput of approximately 3800 barrels per day of the medium gravity oil produced in the two operating fields.

The large closed structure of Joya Mair will be further developed in spite of the present lack of outlet, and it is reported in London that a special refinery probably will be erected at the field after the war.

## Barco Test Drilling

Tres Bocas 4, Cretaceous deep test between the Petrolea and Socuavo fields, Barco concession, Colombia, was reported drilling below 2504 feet on April 4. Two other operations were in progress in the Barco at the same date, both in the Socuavo field, where well No. 16 was swabbing at 5331 feet.

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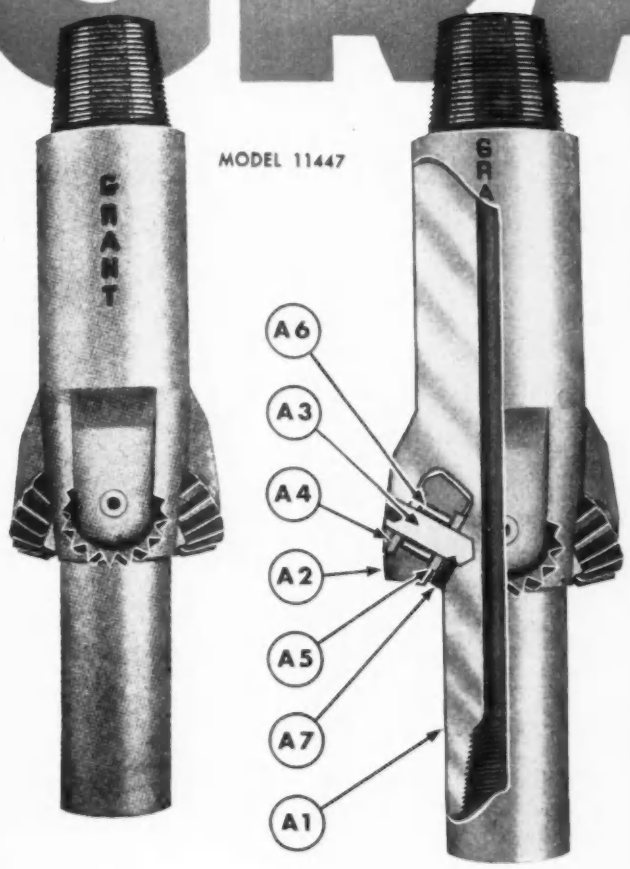


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## ☆ Oklahoma

### *Phillips Opens Oil Pool Northwest of Aylesworth*

Phillips opens new oil pool northwest of Aylesworth; deep wildcat in Caddo County plugged after drill-stem test fails to show; The Texas Company opens new producing zone in West Marlow; Horns Corner extension seen at Deep Rock test.

**Stephens County:** The Texas Company picked up a new producing sand in lower Pennsylvanian series at Sears 1, SW NE NE 20-2n-8w, western outpost to the West Marlow pool. On drill-stem test between 6720-62 feet gas showed in 7 minutes and on a breakdown 3000 feet of oil was recovered. The new horizon is approximately 700 feet deeper than the established zone in West Marlow. Production string has been set at 6714 feet and operator plans an immediate test.

**Hughes County:** A long extension to the Horns Corner pool was seen at Deep Rock Oil Corporation's Hudson 1, NE SW SW 32-7n-10e, which had 4½ million cubic feet of gas with a good oil spray on drill-stem test between 3833-38 feet. Seven-inch casing has been set at 3833 feet for a production test. Besides being 1¼ miles southwest of production, the wildcat is signficant since it is showing for oil from the Cromwell sand which in that area has been considered a gas producer. Recovery was from the Upper Cromwell which had good saturation.

**Caddo County:** Another wildcat drilled to below 10,000 feet has been abandoned. The Texas Company plugged Warden 1, SEC 17-8n-10w, after drill-stem test between 10,260 and 10,334 feet showed only drilling mud.

**Ellis County:** Gulf Oil Corporation's Kelln 1, NE NW NE 5-19n-26w, key wildcat in Western Oklahoma near the Texas line, was making hole below 4635 feet. The test is in the Anadarko Basin and is a rank wildcat midway between the Sayre and Hugoton gas pools. The well is being watched closely since little subsurface data are available in that area. It was located on a geophysical prospect.

**Marshall County:** Two miles northwest of the Aylesworth pool, Phillips Petroleum Company et al have opened a new Bromide sand pool at Gipson 1, SE SE NE 10-6s-6e. Drilled to 3482 feet, it was plugged back at 3400 feet and acidized through perforations between 3300-75 feet, tanking 98 barrels of oil in 16 hours through ¼-inch tubing choke before being shut in for storage.

**Grady County:** Magnolia Petroleum Company's Cunningham 1, CSE SE 33-5n-6w, deep gas-distillate discovery near Ninnekah, was preparing to reperforate and test. Initially opened for about 10 minutes it flowed wet gas estimated at the rate of 95 million cubic feet daily but leaking connections forced a shut-in. A plug has been set at 9120 feet. The well was originally opened through casing perforations opposite 10,879-82 feet in basal Pennsylvanian sand. Electrolog showed oil and gas possibilities in the following sand sections: 10,345-77, 10,381-429, 10,466-74, 10,514-63, 10,850-68, 10,872-78 feet. Only the lower section of the saturated zone has been perforated and tested.

**West Edmond:** Anderson-Prichard Inc., appears likely to extend the West Edmond pool a mile north at Stewart 1, CNW NW 24-15n-4w, Kingfisher County, where saturation was logged in the Bois D'Arc section of the Hunton. The well cut about 40 feet of saturated section and was drilling below 7141 feet.

### *Tornado and Flood Create Havoc in Oklahoma Fields*

Property damage and lost production in Oklahoma oil fields will exceed two million dollars as a result of the tornado and heavy rains that flooded many areas washing out pipe lines, damaging pumping stations and snarling communications. Greatest damage was in the Oklahoma City pool where more than 75 steel derricks were blown down and other installations wrecked.

In the Greater Seminole district a cloudburst flooded leases and damaged pumping stations. The Hoover pool and the East Pauls Valley pool in Garvin County also reported damage.

Because of damage to pumping stations and other production equipment oil runs in the Oklahoma City pool will be drastically curtailed for the remainder of the month.

## ☆ Kansas

### *Marjorie Gas Area May Get Its First Oil Producer*

Wildcat in Marjorie gas area, Barber County, may give pool its first oil producer; Stanolind continues testing Adams well 20 miles east of Hugoton gas field; Ray pool extension swabs 5 barrels of oil an hour; Trapp pool gets ½-mile east extension; unfavorable weather retards work in many areas.

**Barton County:** An important ½-mile extension to the east was given the Trapp pool by Robert L. Williams and S. H. Wilson at Prusa 1, SW SW NE 20-16s-13w. At 3205-10 feet in the Kansas City lime the well flowed 100 barrels of oil an hour. The well was carried to 3400 feet in the Granite and plugged back for the test.

**Barber County:** J. M. Huber's Clay 1,

## Wells Completed in the United States in Week Ended April 21, 1945

**Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.**

| State or District | FIELD COMPLETIONS: New Wells *Oil | Gas | †Input | Dry | Total | Old Wells Deepened | WILDCAT COMPLETIONS *Oil | Gas | Dry | Total | ALL COMPLETIONS: This Week | Last Week | Cumulative: This Year | Last Year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 6 | 5 |
| Arizona | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 3 |
| Arkansas | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 5 | 38 | 61 |
| California | 26 | 1 | .... | .... | 27 | .... | .... | .... | 4 | 4 | 31 | 43 | 598 | 584 |
| Colorado | 2 | .... | .... | .... | 2 | .... | .... | .... | .... | .... | 2 | 2 | 13 | 8 |
| Florida | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 4 | .... |
| Georgia | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1 | 1 | .... | 2 | 1 |
| Illinois | 22 | .... | .... | 3 | 25 | 4 | .... | .... | 4 | 4 | 33 | 25 | 487 | 485 |
| Indiana | 2 | .... | .... | 2 | 4 | .... | .... | .... | .... | .... | 4 | 5 | 89 | 90 |
| Iowa | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 2 |
| Kansas | 16 | 5 | .... | 8 | 29 | .... | 1 | .... | 8 | 9 | 38 | 37 | 441 | 548 |
| Kentucky | 1 | .... | .... | 1 | 2 | .... | .... | .... | .... | .... | 2 | 5 | 132 | 204 |
| Louisiana | 12 | 1 | .... | 5 | 18 | .... | .... | .... | 4 | 4 | 22 | 20 | 285 | 193 |
| North Louisiana | 3 | 1 | .... | 1 | 5 | .... | .... | .... | 2 | 2 | 7 | 7 | 94 | 58 |
| South Louisiana | 9 | .... | .... | 4 | 13 | .... | .... | .... | 2 | 2 | 15 | 13 | 191 | 135 |
| Michigan | 5 | .... | .... | 2 | 7 | .... | .... | .... | 5 | 5 | 12 | 27 | 216 | 172 |
| Mississippi | 4 | .... | .... | .... | 4 | .... | 1 | .... | 6 | 7 | 11 | 5 | 113 | 31 |
| Missouri | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 11 | 5 |
| Montana | 2 | .... | .... | .... | 2 | .... | 1 | .... | .... | 1 | 3 | 3 | 56 | 79 |
| Nebraska | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 2 | 7 |
| New Mexico | 7 | .... | .... | .... | 7 | .... | 1 | .... | 2 | 3 | 10 | 9 | 155 | 127 |
| New York | 15 | .... | 10 | .... | 25 | .... | .... | .... | .... | .... | 25 | 25 | 267 | 366 |
| Ohio | 2 | 3 | .... | 1 | 6 | .... | .... | .... | .... | .... | 6 | 5 | 190 | 250 |
| Oklahoma | 20 | .... | .... | 9 | 29 | .... | .... | 1 | 4 | 5 | 34 | 60 | 688 | 459 |
| Pennsylvania | 27 | 3 | 15 | .... | 45 | .... | .... | .... | .... | .... | 45 | 48 | 801 | 840 |
| Tennessee | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 5 |
| Texas | 76 | 13 | .... | 21 | 110 | .... | 4 | .... | 16 | 20 | 130 | 173 | 2,146 | 1,652 |
| E.Tex.Bor. Co.'s | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 20 | 4 |
| E. Texas Field | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 3 |
| Rest of E. Texas | .... | .... | .... | 1 | 1 | .... | .... | .... | .... | .... | 1 | 7 | 59 | 88 |
| North Texas | 25 | .... | .... | 4 | 29 | .... | .... | .... | 6 | 6 | 35 | 27 | 466 | 383 |
| W. Central Tex. | 8 | 2 | .... | 1 | 11 | .... | .... | .... | .... | .... | 11 | 22 | 145 | 117 |
| West Texas | 17 | 2 | .... | 1 | 20 | .... | 1 | .... | 4 | 5 | 25 | 52 | 560 | 451 |
| Tex. Panhandle | 4 | 5 | .... | 1 | 10 | .... | .... | .... | .... | .... | 10 | 20 | 192 | 61 |
| G. Coast, Upper | 6 | .... | .... | 6 | 12 | .... | 2 | .... | 2 | 4 | 16 | 14 | 216 | 146 |
| G. Coast, Lower | 11 | 2 | .... | 5 | 18 | .... | .... | .... | 2 | 2 | 20 | 21 | 309 | 259 |
| Southwest Texas | 5 | 2 | .... | 2 | 9 | .... | 1 | .... | 2 | 3 | 12 | 9 | 154 | 113 |
| S. Central Tex. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 25 | 27 |
| West Virginia | 1 | 12 | .... | 1 | 14 | .... | .... | .... | .... | .... | 14 | 12 | 227 | 286 |
| Wyoming | 9 | .... | .... | 1 | 10 | .... | 3 | .... | 1 | 4 | 14 | 5 | 60 | 48 |
| Total U. S. | 249 | 38 | 25 | 54 | 366 | 4 | 11 | 1 | 55 | 67 | 437 | 516 | 7,028 | 6,511 |

* Includes distillate wells. † Includes salt water disposal wells.

SE SW 28-30s-13w, flowed an ungauged amount of oil for 2 hours plus a million feet of gas from Viola lime through casing perforations between 4583-93 feet. The wildcat fills in a 2-mile gap in the area. Previous completions have been gas wells including Lion Oil Refining Company's Lemon 1, SE NE NE 28, (18 million cubic feet of gas); Phillips Petroleum Company's Marjorie 1, CNW SW 31, (47 million cubic feet) and J. M. Huber's Gant 1, CNW 32, (38 million cubic feet). Latest test may prove the first oil production on the structure, which covers about a township.

**Meade County:** Stanolind Oil and Gas Company continues testing Adams 1, SWC 8-35s-30w, wildcat 20 miles east of the Hugoton gas area and on a 90,000-acre block. After acidizing with 2000 gallons through casing perforations between 5850-90 feet, the well flowed 1½ million cubic feet of gas. Production is in the Mississippi lime series.

**Norton County:** Helmerich & Payne, Inc.'s Hansen 1, C SW NW 26-5s-21w, after recovering a fish, swabbed 5 barrels of oil an hour through casing perforations between 3654-56 feet. The wildcat extends the Ray pool 2 miles southeast. Production is from Arbuckle lime and the successful wildcat apparently proves more than 1200 acres, mostly controlled by Cities Service Oil Company.

**Sumner County:** El Dorado Refining Company's Patterson 1, SE SE NE 23-33s-2e, recent extension to the Rainbow Bend West pool, on initial production test pumped 15 barrels of oil a day after a 34-quart shot in the Bartlesville sand between 3263-78 feet.

## ☆ New Mexico

### *Drinkard Field Given Important Extension*

Important west extension given Drinkard field, Lea County; northwest outpost for West Lovington field nearing water level without shows; Maljamar deep prospect making test.

**Lea County:** Samedan Oil Corporation's Boyd 1, C NW SE 23-22s-37e, 1⅞ miles west by north of the 6400-foot Yeso (Clear Fork) discovery for the Drinkard area, flowed at a rate of 10 barrels oil hourly when tester used in broken line pay at 6370-6455 feet. Pipe will be run for completion. This well passed up probable commercial oil production at 5090-5180 feet in the Glorietta (Holt) lime, topped at 5050 feet with elevation of 3330 feet.

The Texas Company's Blinebry 1, northeast offset to the Drinkard pool discovery, was drilling dry lime at 7183 feet, having tested a small volume of gas at 6819-6988 feet in lower Yeso.

Skelly Oil Company's Steeler 2, indicated Yeso discovery for the Skelly field, swabbed 10 percent oil and balance salt water on preliminary test of perforations at 7040-70 feet, having previously tested salt water in the 6500-foot zone.

**Maljamar Area:** Phillips Petroleum Company's State-Lea-Mex 4 is credited with having reached the Ellenburger at 11,400 feet, where a drill-stem test was underway.

**West Lovington:** El Paso Natural Gas Company's State-Ramco 1, 1⅜ miles northwest of production, was coring below 5135 feet after testing dry at this level which is below the oil level of the nearest producer.

**Extension:** Amerada Petroleum Corporation's Wimberly 1, C NE NE 26-25s-37e, ½-mile east of oil production in Langlie field, tested 3,736,000 cubic feet of gas natural through 1-inch choke from pays at 2945-3044 feet and 3072-3218 feet. This well perpetuates the lease on 320 acres which has deep possibilities.

**Wildcats:** Stanolind Oil & Gas Company's Jones 1, 3 miles southeast of the Hobbs field, was drilling at 8360 feet without shows since testing 275 feet of oil and gas-cut mud at 7795-7873 feet. The Texas Company's Eaves 1, 11 miles northeast of the Hobbs field, was drilling lime at 6998 feet.

## ☆ West Texas

### *Ector Test May Produce From Basal Silurian*

Ector County semi-wildcat shows production possibilities in Basal Silurian; Fort Stockton sweet crude area scores major extension; Monahans field has new Permian oil zone; big volume of wildcat failures in district.

**Ector County:** The Texas Company's T. P. Land Trust 1-B, 1½ miles southwest of Devonian production in the TXL field, but on a separate structure, recovered 210 feet of oil- and gas-cut mud during incomplete drill-stem test at 9083-9245 feet in Basal Silurian. Additional saturation was logged in drilling to 9300 feet, where a drill-stem test with upper packer at 9087 feet yielded 180 feet of mud, 305 feet of oil and gas-cut mud and 15 feet of free oil. Maximum gas flow was estimated at 65,000 feet daily. Drilling was resumed to explore the Ellenburger.

Amerada Petroleum Corporation's TXL 1, northwest offset to the TXL field discovery, was preparing to perforate opposite effective oil saturation at 7895-8042 feet in Devonian, topped at 7893 feet, 32 feet low. Phillips Petroleum Company's TXL-Phillips 1-A, 1⅝ miles north by east of Devonian producer, but a failure in this zone, was using tester at 8642 feet in Silurian, topped at 8420 feet. A commercial producer was indicated when tester was run at 8468-95 feet, but the oil may be subnormal in quality. Shell Oil Company's Thomas 1-A, ⅞-mile north of the discovery and a failure in the Devonian, was drilling limey-shale at 9450 feet. A preliminary survey of this area indicates it will be erratic in production performance from the Devonian and Silurian although normal in structural position.

**Discovery:** Stanolind Oil & Gas Company's University 1-P, 3 miles south by east of the Fullerton-Devonian 3-well field and the third Devonian strike for Andrews County in the last 8 months, flowed 439 barrels of 44-gravity oil through ¼-inch choke on official gauge after using 500 gallons of mud acid through perforations at 8750-70 feet. The Devonian was entered at 8760 feet, being 339 feet low to nearest well. Preliminary analysis reveals that the oil contains .42 percent sulphur, while the gasoline has an octane rating of 56.5. These qualities are on a par with the Fullerton-Devonian crude, but the oil from the new strike congeals at comparatively high temperature, and will not be mixed with the 2 Fullerton field grades.

**Howard County:** Continental Oil Company and Group One Oil Corporation's Settles 1-D-113, offsetting shallow production, eliminated the Ellenburger as a source of production in testing 7300 feet of salty-sulphur water in addition to rotary fluid when tester was used at 9921-10,122 feet. The hole was plugged back to 10,105 feet on account of losing returns, and a second test yielded 8500 feet of salty-sulphur water. The prospect will be plugged back for production test of comparatively thin zone of oil porosity in the 8900-foot Pennsylvanian.

**Glasscock County:** Phillips Petroleum Company's McDowell-McDow 1, which has repeatedly threatened to blow out since passing up high-pressure oil and gas pay in the 8400-foot Wolfcamp, was running protection string of pipe to bottom at 9421 feet. It will be carried to the Ellenburger near the 10,500-foot zone before testing.

**Pecos County:** The Texas Company's Riggs 1, C SE NE T&St.L.Ry. 8, Block 146, extended the Fort Stockton sweet crude area 1 11/16 miles south with potential of 169 barrels through ½-inch choke from sand at 2887-2903 feet in Yates, topped at 2840 feet, after a 40-quart shot at 2890-2903 feet. Riggs 1 is 83 feet low on the Yates marker when correlated with the company's Hart 1, nearest well and the highest in the field, but first oil pay occurs 47 feet in the section, as compared to 117 feet in the section for Hart 1. The crude in this area contains only .35 percent sulphur. The 6 widely separated producers average 35-gravity oil, and are dependent upon tank trucks for a market outlet.

**Ward County:** Shell Oil Company's Sealy-Smith 6, ½-mile northwest outpost for the Monahans 2-pay field, centering upon the Ward-Winkler County line, confirmed a shallower pay in the Permian, possibly the Holt zone, in flowing at a rate of 50 barrels of 35-gravity oil per hour when tester was used at 4948-5038 feet. A drill-stem test at 5728-94 feet yielded 100 feet of mud, 750 feet of oil and 150 feet of salt water. This zone is equivalent to the 5600-foot Clear Fork oil discovery, which has accounted for only 1 well. The company has 4 Ellenburger wells, with 160-acre spacing, on its 19,725-acre lease. Sealy-Smith 6 was drilling at 5905 feet to explore the 10,100-foot Ellenburger.

Gulf Oil Corporation's Edward's 1-E, 3 miles south by east of the Monahans field, and about 400 feet lower struc-

turally, failed to indicate production in testing the Ellenburger at 10,556 feet.

**Crockett County:** Amerada Petroleum Corporation's Todd 3-F, west side of the Todd field, flowed 2567 barrels, gas-oil ratio 573-1, on potential test through ¾-inch choke after flushing Crinoidal perforations at 5805-5910 feet with 500 gallons of acid. It is an east offset to a failure. Continental Oil Company's Todd 13, which caught fire following a blow-out in the Ellenburger while making an estimated flow of 100 barrels of oil hourly, failed to recover stuck drill-pipe, and was completed for 1087 barrels potential through ¾-inch choke from Crinoidal perforations at 5881-5977 feet.

**Wildcat Failures:** Sinclair Prairie Oil Company's Johnson 1, Southwestern Gaines County, entered the Silurian at 8535 feet and quit in sulphur water at 8692 feet. In Andrews County, Humble Oil & Refining Company's Jones 1, a mile south of a 10,929-foot failure, tested sulphur water at 8384 feet. Stanolind Oil & Gas Company's Texas Land & Mortgage Company 1-B, Terry County, proved dry in the Clear Fork at 7012 feet. Gulf Oil Corporation's Mallet 23, Hockley County and fifth Clear Fork failure within and near the Slaughter field, was abandoned at 7536 feet.

## ☆ North Texas

### *Grayson County Prospect Shows Green Oil On Tests*

Grayson County Ordovician prospect delayed by clogged tubing, but showing green oil on brief swabbing tests; Clay County has 2 promising wildcats awaiting production tests; record thickness of Ellenburger established by Archer County completion.

**Grayson County:** The Pure Oil Company's Little 1-A, Gordonville prospect, was pulling tubing to bail the hole after encountering difficulty with clogged tubing. Production test is being made of broken saturation in Ellenburger at 9479-9919 feet with open hole below 9205 feet. An encouraging volume of live green oil was recovered during the brief periods that tubing perforations remained open.

**Clay County:** Wayne H. Hammon et al's Bryans 1, prospective Bend conglomerate discovery and a mile east by south of Dean, was showing a small volume of oil and gas in swabbing down to 2500 feet after perforating at 5871-91 feet. This wildcat entered the Bend at 5594 feet, and logged effective saturation at 5863-88 feet.

Continental Oil Company's Thomas 1, 2 miles north of Newport and 6 1/3 miles southeast of a Simpson lime discovery, nearest production, was swabbing 2 to 3 barrels of fluid hourly, averaging 5 percent oil, after using 2000 gallons of caid in Ellenburger at 6923-7106 feet. It is due to plug back and perforate opposite oil show in Simpson at 6742-55 feet, while a commercial well is anticipated from Strawn oil sand at 4145-67 feet.

Continental Oil Company's Hillin 1, 2 miles southeast of the Wynn-Mississippi pool, recovered only 80 feet of rotary fluid and 30 feet of slightly oil-cut mud in using tester in conglomerate at 6078-91 feet. It will continue to the Ellenburger.

**Archer County:** Phillips Petroleum Company's Bullington 1, Browning sector of the Vogtsberger field, has a rated potential of 450 barrels of 43-gravity oil through ⅜-inch choke after acidizing perforations at 5236-80 feet in Ellenburger, topped at 5233 feet, having plugged back from granite at 7915 feet. This well set a new record for Texas on Ellenburger penetration, having logged base of dolomite at 7228 feet and base of gradational Ellenburger at 7800 feet for a 2567-foot section. Barren Cambian sand, lime and conglomerate were logged from 7800 to top of igneous rock at 7913 feet. The Ellenburger thickness proved greater than anticipated.

Information gained from this project serves to dispel speculation that has prevailed for decades within the district as to whether production exists under a normal body of the Ellenburger. A single well in Pecos County is the only producer from Pre-Ellenburger in Texas.

**Cooke County:** Sinclair Prairie Oil Company's Thomson 1, north offset to the 6800-foot Beasley (Strawn) sand discovery in the Sivells Bend field, temporarily passed up oil-saturated sand at 6827-54 feet, and uncovered a deeper zone at 6947-68 feet that tested 135 feet of oil- and gas-cut mud.

The Texas Company has 4 active wildcats in this county. Bulkeley 1, 2⅛ miles east of the Walnut Bend field and an Ellenburger project, was drilling sandy-shale at 4432 feet, while Morris 1, 2½ miles southwest of Woodbine, was drilling shale at 4240 feet. Prospects on the west side of the county include Hutson 1-C, which was drilling shale at 3206 feet, and Sowder 1 in shale and chert at 3926 feet.

## ☆ East Texas

### *Production Test Given Henderson Deep Prospect*

Production test underway on Henderson County deep prospect; Hunt County wildcat reaches Smackover lime objective; Pickton field has above average producer.

**Henderson Countv:** The Texas Company's Morse 1, S. Calderon Survey and 1½ miles southwest of Chandler, was swabbing down to test perforations at 10,364-10,386 feet in Travis Peak, topped at 10,302 feet. Prospective producing zone at 10,366-10,378 feet was passed up without a test in drilling to 10,643 feet.

**Smackover Tests:** The Ohio Oil Company's Popper 1, Hunt County wildcat and 2½ miles southeast of Cash, is credited with having entered the Smackover at 9015 feet, and was coring dry sandy-shale at 9055 feet without shows. H. C. Cockburn et al's Gilliam-Cockburn 1, Falls County failure in Smackover, topped at 7134 feet, continued to plug back and perforate by stages, having tested salt water in the Cotton Valley at 6370-75 feet. Tests at higher levels are scheduled.

**Failure:** M. E. Davis et al's Shelby 1, Camp County wildcat, proved barren in the Pittsburg field zone, and was abandoned at 8264 feet.

**Wood County:** Amerada Petroleum Corporation's Gamblin 2, northeast edge of the Winnsboro field, was flowing by heads while cleaning itself from Gloyd perforations at 8160-90 feet with the hole bottomed at 8340 feet. The company is starting Brown 1 on the north end of the field.

**Hopkins County:** Humble Oil & Refining Company's W. H. Burns 1, Antonio Lazarin Survey, is rated the largest of 4 producers in the Pickton field in flowing 676 barrels of 51-gravity oil, with gas-oil ratio of 1378-1, on natural potential test through ¼-inch choke from Bacon lime, Upper Rodessa, perforations at 7885-95 feet. The company's J. M. Burns 1, involving a 141-acre lease acquired from the Sun Oil Company, was drilling at 7040 feet, while its P. T. King 1 was drilling at 2580 feet. The next test will be on its E. P. King tract. Hunt Oil Company's Miller 1, 3000 feet northwest of its single producer, tested 80 percent salt water from perforations at 7904-31 feet, and will recement.

**Harrison County:** R. J. and D. E. Whelan's wildcat, the Allen Peal 1, Bettie Humphrey Survey, 2 miles northwest of Harelton, has been taken to 6900 feet. It showed for a gas discovery on drill-stem test at 6750 feet. Drilling is nearing end of the Rodessa zone and top of Pettit lime.

F. A. Fuller and Edgar Johnston's Lucy Long 1, Simpson Holloway Survey, 6 miles southwest of Waskom townsite in the Waskom pool, indicated both an oil and a gas and distillate producer on production tests. On a 1 hour drill-stem test at 6182-6240 feet in the Pettit, recovery was 1320 feet of fluid, 900 feet oil. The test was made through 240 casing perforations. Plug was set at 6170 feet and from perforations between 6120-40 feet, the well showed 30 to 50 million cubic feet of gas, rich in distillate. Two more porous zones are to be tested and perforations are to be made higher.

**Panola County:** Humble's Pirkle 1, 3 miles southwest of Carthage townsite, continued testing at 6335 feet. Skelly Oil Company apparently hit first oil production from the Pettit lime of the Trinity series at the S. E. Matthews 1, 3 miles east of Beckville. The test showed for an oiler on initial test through casing perforations at 6262-85 feet and 6375-88 feet. The well has been shut in and tanks are being built.

A. D. Roberts Fee 1, Carthage Trinity series field, approximately 5 miles northwest of the Carthage townsite, was completed with production rated at 150 million cubic feet of gas per day, from both sections of the Pettit lime zone with hole bottomed at 6202 feet. The producer was on the northwest side of the proven area when it was started and is the first well in that area for Roberts.

### *Arkansas Hearing Set on Prevention of Waste*

The Arkansas Oil and Gas Commission, El Dorado, Arkansas, will hold a public hearing on the conservation and prevention of the waste of oil and gas at 10 a. m. April 23, in the Columbia County court house, Magnolia Arkansas.

It will decide whether waste of oil or gas is taking place or is imminent in the state. The optimum equitable daily rate of production of oil and gas from Columbia, Lafayette, Union, Miller, Nevada and Ouachita counties will be determined.

## ☆ Southwest Texas

### *Shallow Wildcat Staked Near Rio Grande City*

Shallow wildcat test staked near Rio Grande City in Starr County; Boyle field well is completed; Zapata County wildcat test is planned.

**Starr County:** Panal Oil Company of Houston is preparing to drill a shallow wildcat test 6 miles north of Rio Grande City. It is the Lillie May Baird 1 in Porcion 82. Projected depth is 1800 feet.

In the Boyle field, W. L. Goldston's Carruth 2-B has been completed for 60.74 barrels of 44-gravity oil daily through a 9/64-inch choke from perforations at 3932-43 feet. Tubing pressure was 215 pounds with the gas-oil ratio 830-1. Total depth is 4307 feet.

W. L. Goldston's A. M. Kelsey 6-C, Ross field, flowed 59 barrels of 24-gravity oil daily through a 12/64-inch choke from 2404-13 feet. Tubing pressure was 100 pounds, casing pressure 275 pounds, gas-oil ratio 460-1.

**Duval County:** Another oiler for the East Longhorn field is seen in Hiawatha Oil & Gas Company's George Herberger 8. On a 13-minute drill-stem test the well recovered 230 feet of oil and 20 feet of oil-cut mud, no water, from 5151-54 feet. Total depth is 5218 feet with 7-inch casing being set at 5192 feet for completion.

Butcher-Arthur, Inc., and Taylor Refining Company's G. Dudley Fitzsimmons et al 1, Robinson field, has been completed for 60 barrels of 33.8-gravity oil daily through a 764-inch choke from perforations at 4023-33 feet. Tubing pressure was 450 pounds, gas-oil ratio 308-1.

**Zapata County:** A mile northwest of Charco Redondo, A. E. Wiederkehr has staked location for Maria T. G. Garcia 1, in the north quarter of Block 11, Share "A."

### *Imogene Field Receives Northeast Extension*

Imogene field being extended mile northeast by small pumper; Guadalupe wildcat has slight oil show in Buda lime; shallow wildcat staked in Val Verde County.

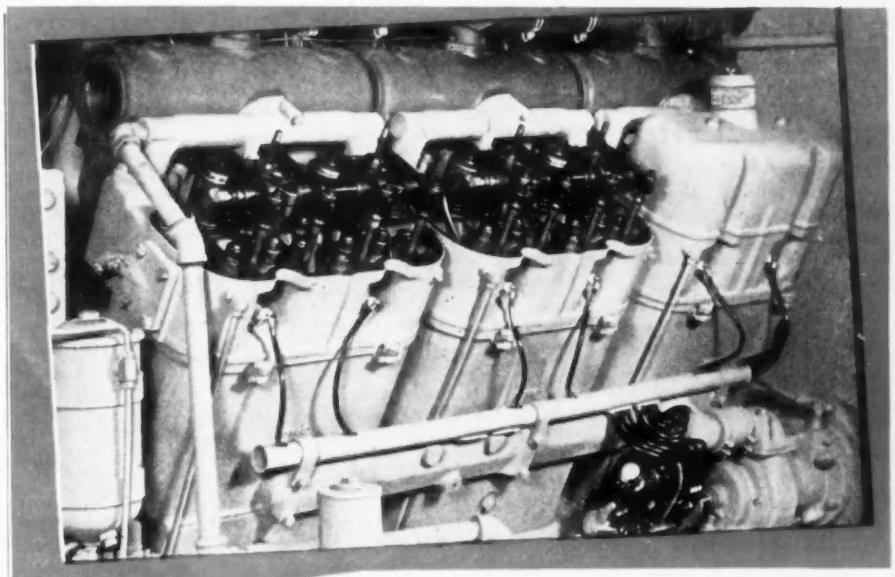
**Atascosa County:** Humble Oil & Refining Company's Joseph Courand 1 is being placed on a pump to extend the Imogene field a mile northeast. On a 40-minute drill-stem test at 7661-69 feet the well recovered 240 feet of oil, 90 feet of oily mud, and 150 feet of salt water. Total depth is 7669 feet.

Gorman & McDermott U. A. Domsch 1, wildcat 4 miles north of Poteet, has been abandoned at 3940 feet.

Three miles northeast of Pleasanton, H. H. Howell will drill his F. J. Jaksik 1, a 7000-foot wildcat test.

**Guadalupe County:** R. V. Muckelroy's Tom H. Baker 1, wildcat 3 miles west of Luling, is shut down at 2437 feet. This well topped the Buda at 2431 feet and logged 6 feet of Buda lime at 2431-37 feet which carried a slight show of oil.

**Val Verde County:** Six miles north of Juno, in the northern part of the county, B. E. Wilson spotted Wilson & Hodge 1 as a 1500-foot wildcat test.

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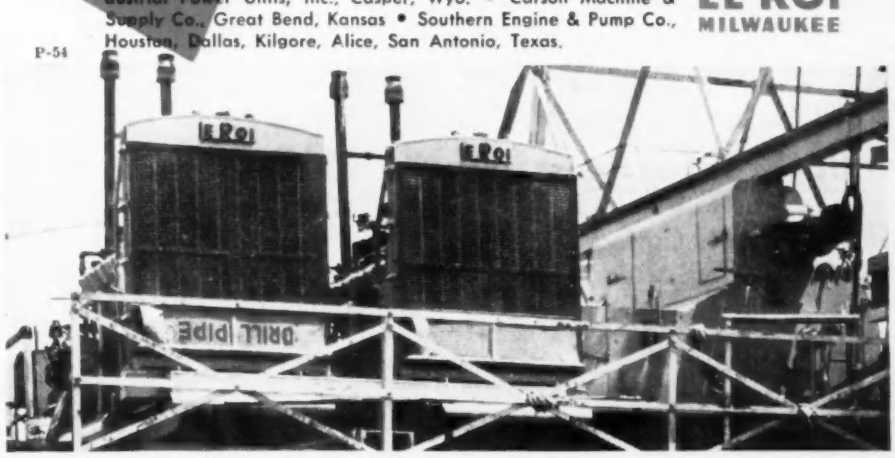
P-54



## ☆ Lower Texas Coast

### *Hope Field, Lavaca County, Receives East Extension*

Hope gas and distillate field in Lavaca County extended; Willacy County wildcat logs sand showing oil and gas; Sun tests Brooks County wildcat; Bee County well shows gas and distillate; deep test planned near El Toro.

**Lavaca County:** Sterling Oil and Refining Corporation has pushed the Hope field a mile east with the completion of Henry Rochelle 1. Perforated at 7720-35 feet, the outpost flowed 800,000-1,000,000 cubic feet of gas daily along with 50 barrels of fluid through a ⅛-inch choke. Depth is 9772 feet with casing set at 9760 feet. The well logged another sand at 8910-20 feet which recovered gas and distillate on a drill-stem test. This well gives the Hope pool 3 producers and the construction of a recycling plant is being discussed.

**Willacy County:** Sands showing oil and gas have been logged in Magnolia Petroleum Company and J. S. Abercrombie Company's N. H. Dohe 1, 10,500-foot wildcat test 3 miles southwest of Raymondville. The test now is drilling below 8775 feet in sandy shale with the best oil show having been logged at 8160-80 feet. Other sands at higher levels in the Frio formation were drilled showing some oil and gas. No drill-stem tests have been made and operators may set casing for protection before reaching the projected depth.

**Brooks County:** Sun Oil Company's D. J. Sullivan 5, 10,000-foot wildcat 8 miles southeast of Falfurrias, is coring below 7869 feet in sandy shale. On a 13-minute drill-stem test at 7833-40 feet the well showed some gas and distillate through a ¼-inch choke. Shutin pressure was 3800 pounds.

**Bee County:** Hewit & Dougherty's T. W. Wolfe 1, Barton survey, 10 miles west of Pettus, made a 9-minute drill-stem test at 6749-55 feet and recovered 15 feet of brown condensate and 75 feet of salt water with a strong gas pressure through a ¼-inch choke. Working pressure was 495 pounds. A recovery of 4 feet of hard gray sand with a slight show of oil was made in a core at 6755-60 feet and operator was running another drill-stem test.

Navarro Oil Company's F. A. Dahl 1, 3½ miles northeast of Pettus, was reaming at 6728 feet after logging a slight gas odor at 6697-6728 feet. Projected depth is 7000 feet.

**Jackson County:** Butcher-Arthur, Inc., has made location for an 8500-foot wildcat 8 miles south of El Toro. It is the Andrew Lorenzen B-1 in the John J. Linn survey.

## ☆ Upper Texas Coast

### *Shell Test Sets Casing For Completion Attempt*

Wildcat test in Garwood area, Colorado County, sets casing; second oiler seen in sublime field; McCarthy testing Brazoria County wildcat; Walker County wildcat test reported setting casing.

**Colorado County:** Shell Oil Company's Kyle Estate 1, J. Grant survey, wildcat 4 miles northwest of Garwood, has set a string of 5½-inch casing at 8850 feet for a completion attempt. Depth is 11,944 feet.

A second oiler for the Sublime field is seen in Tide Water Associated Oil Company's W. F. Albert 1, northeast offset to the Underwood 1 discovery well. On a drill-stem test in open hole at 9530-35 feet, the well flowed at the rate of 148 barrels of oil daily with a working pressure of 1680 pounds and gas-oil ratio of 1600-1. The discovery well was completed through perforations at 9500-05 feet, flowing 48.8-gravity condensate.

**Harris County:** Sun Oil Company has made location for an 8500-foot wildcat test 3½ miles west of Huffman. It is the Foster Lumber Company B-1 in the A. Turner Survey.

Cheesman and Cranston of Houston have entered the Spring field by staking Mrs. L. V. Snyder 1 on a 68.39-acre tract in the Wiley Smith Survey, Abstract 706.

**Fort Bend County:** Stanolind Oil & Gas Company is preparing to drill a 6750-foot wildcat test southwest of the Big Creek field. It is the Selma Jaeggli 1 in the Barnabus Wickson Survey, Abstract 95.

**Walker County:** Three miles east of Weldon and south of the Kittrell field, Magnolia Petroleum Company was reported setting casing in its Thompson-Long Leaf Lumber Company. No information is being released on this important wildcat test.

**Montgomery County:** A dual completion attempt is under way at Pan American Production Company's L. E. Posey 1, east outpost in the Pinehurst field. Operator will dually complete in sands at 9600 feet and 11,050 feet. The latest test through perforations at 9564-87 and 9592-9622 feet showed a daily flow of 1,500,000 cubic feet of gas and 75 barrels of distillate through a ⅜-inch choke. Maximum tubing pressure was 625 pounds. In the 11,050-foot zone, the well recovered a good flow of gas and condensate.

**Brazoria County:** Glenn H. McCarthy's W. W. Smith 1, wildcat test in the John Bradley survey 9 miles northwest of Angleton, has casing set at 9700 feet and operator is making squeeze jobs before attempting completion.

**Jefferson County:** Gulf Oil Corporation's Hamshire et al 2, deep test at Fannett, perforated at 12,038-060 feet and tested dry. Another test now is being attempted. Total depth is 12,471 feet with 5½-inch casing set at 12,171 feet.

**Chambers County:** In the Lost Lake area, Gulf Oil Corporation's W. F. Mayes et al 1, Dorr survey, bottoms in salt at 6495 feet and will drill deeper. This is a 12,000-foot project.

Humble Oil & Refining Company's M. E. Mayes 4, Mayes field, flowed 13 barrels of 41.4-gravity oil an hour through a 3/16-inch choke from perforations at 8169-77 feet.

### *Kansas Hearing Set*

Kansas State Corporation Commission has set April 27 to consider market demands and to fix the state and pool allowables for May. Hearing is scheduled for 10 a.m., in Wichita.

## ☆ South Louisiana

### *Union Sulphur Discovery Well Gets Final Gauge*

Final gauge made on Union Sulphur's discovery well in the South Bayou Mallet field, Acadia Parish; east extension well in Iota field, Acadia Parish, is drilling below discovery sand; Venice field wells testing.

**Acadia Parish:** Union Sulphur Company's M. Kahn 1, wildcat discovery in the South Bayou Mallet field, has been completed for 122 barrels of 37-gravity oil daily through a 7/64-inch choke through perforations at 9610-14 feet. Tubing pressure was 1300 pounds and gas-oil ratio, 595-1. In addition to the oil, the well is making 10 percent water. Depth is 10,320 feet.

East of the discovery well in the Iota field, Union Sulphur Company's Medlenka 2 is drilling below 10,700 feet in shale. The discovery well was completed through perforations at 9664-80 feet.

**Iberia Parish:** Shell Oil Company's Smith-State 1, Lease 500, wildcat test in the Week's Island area, has pipe stuck with a total depth of 14,025 feet. The pipe is stuck around 13,750 feet with operator attempting to wash over.

**Plaquemines Parish:** Tide Water Associated Oil Company is preparing to complete two new wells in the Venice field. The Manhattan 1-C flowed 11 barrels of 33.5-gravity oil an hour while making a drill-stem test through perforations at 11,893-898 feet. The C. L. Johnson 4 flowed 8 barrels of 30.2-gravity oil an hour from perforations at 8355-60 feet. Operator still is testing on both wells.

**Cameron Parish:** Gulf Refining Company's M. Gray C-1, wildcat test in the Johnson Bayou area, was running an electrical log at total depth of 10,057 feet.

## ☆ North Louisiana

### *Two Wildcats Are Failures; Four Locations Staked*

Two wildcats reported failures; gasser completed; 4 locations staked; northwest extension for Benton area continues to test.

**De Soto Parish:** W. I. Nowling's Boone 1, in 25-11-11, was declared a dry hole at 3510 feet. The wildcat was drilled on a 40-acre tract. Dale W. Moore, Trustee secured permit to abandon E. P. Lee 6, 33-14-13. The well was scheduled to the 2900-foot zone. A. J. Bankhead sought a permit to drill Porter 1, a wildcat, north and east of the southwest corner of 23-12-13w. The test is to go to 3000 feet.

**Bossier Parish:** Vaughn and Hurley's northwest extension, the Ellerbe 1, 3-20-13, Benton area, failed to indicate production. Operators planned to test at 8500-08 feet. A drill-stem test at 8100 feet indicated production of gas-distillate from the "D" sand of the Cotton Valley. Packer was set at 8900 feet and a 3-hour drill-stem test at 8948-60 feet showed a slight blow of gas. Barnsdall Oil Company's Welori Lumber Company was nearing "D" sand producing zone.

**Caddo Parish:** An edge well was chalked up as a failure when James

Forgotson's Cook Unit 1, 10-19-16, tested dry and was abandoned at 2785 feet. F. A. Griffin was rigging up at the Mary Thigpen 1, in 25-22-15w.

**Claiborne Parish:** Midstates Oil Corporation's Parker Unit 1, east and south of the northwest corner of 23-23-5w, was staked in the Haynesville field to go to the Cotton Valley.

**Sabine Parish:** Mrs. S. B. Evans staked Burkett 1, 16-9-13, Converse field. R. A. Whitehurst, drilling contractors, will go to the chalk zone about 2000 feet.

**Lincoln Parish:** The California Company is to drill a wildcat, M. N. Nobles et al 1, in 12-19-4w. The test is to go 10,500 feet.

**Richland Parish:** Murphy-Sun Oil Company is to drill Nathan Williams Unit 1, south and east of the northwest corner of 26-17-9e, in the Delhi field.

**Union Parish:** Interstate Natural Gas No. 168 Fee, 15-20-3e, was completed with a yield of 3,042,000 cubic feet of gas daily. Pressure is 855 pounds. Depth of the hole is 2131 feet.

**Webster Parish:** Hunt Oil Company tested several sections of lower Cotton Valley formation with only a small show of gas at the Mrs. O. G. Roberts 1, 11-23-10. It was then plugged back to test the upper Cotton Valley formation. Total depth is 11,675 feet.

### *Pays Quarter of Million For Employe Suggestions*

Production suggestions from employees netted General Electric workers $232,735 in awards during 1944, according to company tabulations. Payment was made for 19,488 ideas adopted by the suggestion committee, slightly fewer than the all-time high of a year ago but 22 percent more than those adopted in 1943.

Some of the suggestions incorporated into the company's production program aided the war effort by showing how to save critical materials or how to reduce the time required to complete a job.

Awards ranged from $2000, the highest, through $715, $610, and $500 to the average of $11.94.

Since 1906 General Electric has paid out more than $1,500,000 to employes for such suggestions.

## ☆Arkansas

### *Two Completions Noted; Several Wells Testing*

Two completions noted; several wells testing; few locations, one a wildcat.

**Columbia County:** Hassie Hunt Trustee, Tide Water Associated Oil Company and Seaboard Oil Company are to drill Pittman-Sanders 1 SW NE 17-18-19, West Atlantic field. Durbin Bond completed Wesley A-3, SE NW SW 7-15-19, in the Stephens-Smart field, pumping 70 barrels daily from perforations between 3960-68 feet.

In the Haynesville extension, Midstates Oil Corporation is below 4350 feet at Taylor-Partee-Wilson Unit 1. Ragsdale and Bradham were still trying to make a commercial producer of Booth Unit 1, Village field, from 7359-70 feet. It has been testing oil and water.

**Lafayette County:** In the McKamie field, Barnsdall Oil Company was drilling below 8396 feet after a drill-stem test in Moore-McClendon Unit 1, 34-17-24, from 8279-94 feet and a 30-minute open flow on a ⅜-inch choke on top and bottom. Recovery was gas-cut mud. In the Patton field, the company has derrick up on Moore Heirs 1, 32-17-24.

**Union County:** D. V. Lacefield is to drill M. L. Sumners A-2, NW NW SW 13-18-14, Hillsboro field. Hickey & Wallingsford completed their M. L. Sumners 5, SEC NE SW 13-18-14, with open hole from 2231-44, pumping 31 barrels of oil and 5 barrels of salt water daily. First move in development of the Strong deep lime field, which was brought in last fall, is being made by Root Petroleum Company, rigging up on Union Sawmill 2, SW NE 27-18-12.

**Miller County:** The Carter Oil Company is to drill T. J. Beauford 2, NWC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NW SE 32-16-26, Fouke field. They plugged and abandoned Beauford 1, C NW SW 32-16-26, after drilling to 3627 feet. Skelly Oil Company found Texarkana National Bank 1, 32-16-26, dry after several trials between 3670-4335 feet.

**Wildcats:** W. O. White is on location at Evelyn W. Thudium 1, NE SE 3-15-2, Chicot County. McAlester is past 1000 feet at the Couch-Stagg 1 NW SW 11-16-20, near McNeil, Columbia County. Curtis Kinard was rigging up T. C. Deal 1, C NW SE 29-11-17, Drew County. In Franklin County, Sherrod and Apperson's E. B. Moyer No. 1, is below 2200 feet. Stanolind Oil and Gas Company was drilling below 4832 feet at B. G. Maxwell 1, Pope County. Lion Oil Company is below 110 feet at Nalley 1, White County.

## ☆ Mississippi

### *Clarke Test May Be Best Langsdale Producer*

Clarke test may be Langsdale field's best producer; shows recovered by West Heidelberg test; extension of Eucutta field to be attempted; test completed northwest of Heidelberg area.

**Clarke County:** Kirby Petroleum Company's Long-Bell Petroleum Company A-2, C NW NE SE 25-1n-17e, has indications of being the largest producer in the Langsdale field. The well swabbed 120 barrels of oil in 12 hours with production from perforations in the Eutaw horizon. Pump is installed and well is waiting on storage. Kirby's Long-Bell Petroleum Company C-1, CNW NE SW 30-1n-18e, probably will be the fourth producer at Langsdale. Eutaw was topped at 3645 feet and cores taken from 3650-3750 feet were saturated with heavy oil. The well is only a few feet lower than the discovery well. Coring will continue to about 3785 feet before running electrical log. Sinclair-Wyoming Oil Company will undertake to extend production south in the Langsdale field with W. D. Griffith 1, C NE NE NE 36-1n-17e.

**Adams County:** The California Company's National Gasoline Company of Louisiana 10, 67-7n-1w, in the Cranfield field, is drilling below 10,538 feet in basal sand. Electrical log has been run and corings taken at 10,361-10,400 feet with no shows reported. The California Company's Laurie G. Ratcliffe 7, 67-7n-1w in the same field, has been completed with an initial production flow of 302 barrels of 39.3-gravity oil in 22 hours. Production is from 162 perforations at 10,323-350 feet in basal sand. California's Laurie G. Ratcliffe 6, 67-7n-1w, Cranfield, is testing in pits after perforating at 10,364-376 feet.

**Hinds County:** The Carter Oil Company's W. G. Davis 1, C NE NE 15-3n-4w, has topped the Massive sand zone at 9358 feet and is coring below 9415 feet in shale with no shows reported.

**Franklin County:** Gulf Refining Company's Ella G. Lees 1, NWc 32-7n-1e, outpost well scheduled to the Massive sand in the Cranfield pool area, is drilling below 4730 feet in shale and streaks of dry sand.

**Jasper County:** Gulf Refining Company's Elizabeth Sullivan 1, 6-10n-10w in the West Heidelberg field, is drilling in the Tuscaloosa zone below 5732 feet. Slight shows of oil have been recovered in drill-stem tests further up the hole and 7-inch casing was being set to 5206 feet. Gulf has also made location for R. C. Gregory 1, which will test the Tuscaloosa horizon in NE SW 9-10n-12w, 6 miles northeast of the company's Soso gas-distillate discovery. Sinclair-Wyoming's W. A. Bethea 1, C SE NW 12-1n-12e, 2¼ miles northwest of production in the Heidelberg area, has been completed with an initial production of 14 barrels of oil and 100 barrels of salt water. Excessive salt water is caused by poor cement job which will be rectified upon completion of Sinclair-Wyoming's Pearl Bethea 1, a short distance away in 12-1n-12e.

**Jeff Davis County:** Gulf Refining Company's V. G. Gholar 1, 27-9n-19w in the Gwinville field, has indicated no extension of the productive section in tests made last week. After drill-stem tests recovered gas-condensate from 8724-30 feet, subsequent cores indicated continuation of gas-condensate to base of that sand at 8741 feet. The well was cored to 8900 feet with no shows noted to that depth. Correlation run of electrical log will be made at 8969 feet.

Gulf Refining Company's Sarah Griffith 1, 35-9n-19w in the Gwinville pool ran electrical log at 7749 feet, about 10 feet above top of the Eutaw shale section. On a correlation point near the bottom of the hole the well was 37 feet lower than the discovery well a mile northwest. Well will be cored continuously to the top of the Marine Tuscaloosa. Sandy shale has been cored at 7991 feet with first porosity expected at about 8010 feet.

**Neshoba County:** H. H. Hamilton has


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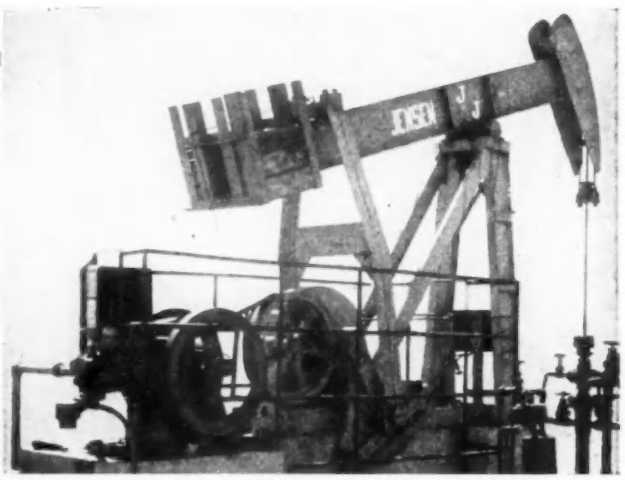

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secured a permit to drill the B. A. Ritchie 1, 3-12n-12w, 9 miles north of Philadelphia. Only 3 tests have been made in this area and all were dry holes. Formations which in other sections of the state are producing at about 10,000 feet were penetrated here at much shallower depths.

**Wayne County:** Gulf's W. F. Davis 1, 2-9n-9w, will undertake to extend production westward in the Eucutta field. Successful completion of this well would move the Eucutta field nearer the Heidelberg field.

Gulf's Wausau Southern Lumber Company 3, SEc SW NE 12-9n-9w, Eucutta field, is reported to be completed with oil swabbed at the rate of 125 barrels a day. Fluid is standing 1200 feet from the surface and a pumping unit will be installed. Sun Oil Company's Mrs. Addie Finley 1, 7-9n-8w in the Eucutta field, was running 5½-inch casing after a drill-stem test at 5216-31 feet recovered 630 feet of oil in 20 minutes.

### Georgia

Another failure was reported in Georgia's wildcat program when Hunt Oil Company abandoned Superior Pine Products Company 2, Land Lot 317, Land district 13, at 4060 feet.

**Toombs County:** Tropic Oil Company's Gibson 1, wildcat 5 miles southwest of Lyons, reached 3222 feet and was shut down waiting on drill stem. Shows of oil have been reported in samples taken at about 2168-75 feet. Sand believed to be Tuscaloosa was topped at 2668 feet.

### Alabama

Production tests in the Gilbertown field, Choctaw County, continued to be delayed by repairs to the steam engine of Central Electric Power & Treating Plant. H. L. Hunt has 5 wells at the testing stage.

**Washington County:** J. T. Parks' S. A. Hobson 1, C SE NE 9-8n-2w, topped Eutaw at 2660 feet and was shut down waiting on orders after reaching 3185 feet.

Wayne Refining Company's wildcat, Willie Mitchell 1, NW NE 12-8n-3w, cemented surface casing at 600 feet and is drilling below 630 feet. The test is in the extreme northeastern part of the county.

**Walker County:** Glen D. Rose Oil & Gas Company's Ulysses 1, C N½ NW SE 6-13s-6w, is drilling below 1255 feet.

**Fayette County:** W. M. Dalton's Morris White 1, C NW SE NE 21-16s-11w, was still shut down for repairs at 840 feet.

### Florida

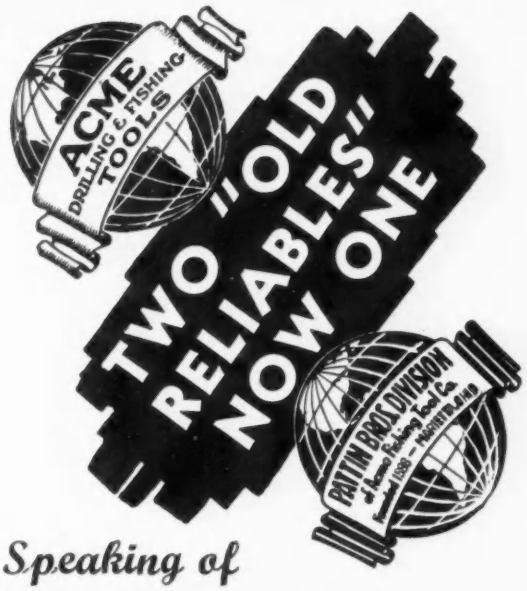
Florida's deepest drilling well has still reported no shows. The test, Humble Oil & Refining Company's Gulf Coast Realties 4, 20-48s-30e, in the Sunniland area of Collier County, is drilling below 11,171 feet in lime and anhydrite.

**Gulf County:** The Pure Oil Company's Kate Gaskin 1, NE NW 19-5s-9w, prospective deep test, is below 3490 feet, after setting casing to 1962 feet.

**Highlands County:** Humble is still fishing for stuck drill pipe at 6701 feet in G. C. Carleton Estate 1, C SW NE 34-38s-29e.

**Charlotte County:** Humble's Lowes-Treadwell 1, C SW NE 17-42s-23e, is drilling in dolomite below 1921 feet.

**Monroe County:** O. D. Robinson's State 1, W of NEc NW¼ 29-59s-40e, is drilling below 3584 feet.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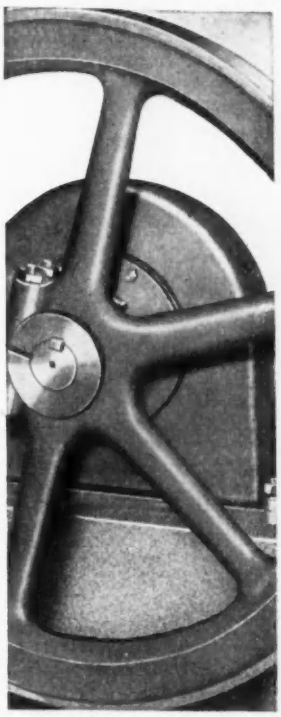

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## ☆ Illinois Basin

### Jasper County, Illinois, Prospect Tests McClosky

Jasper County prospect tests McClosky; Saline County test flows after shot; Jefferson County has one of state's best producers in several weeks.

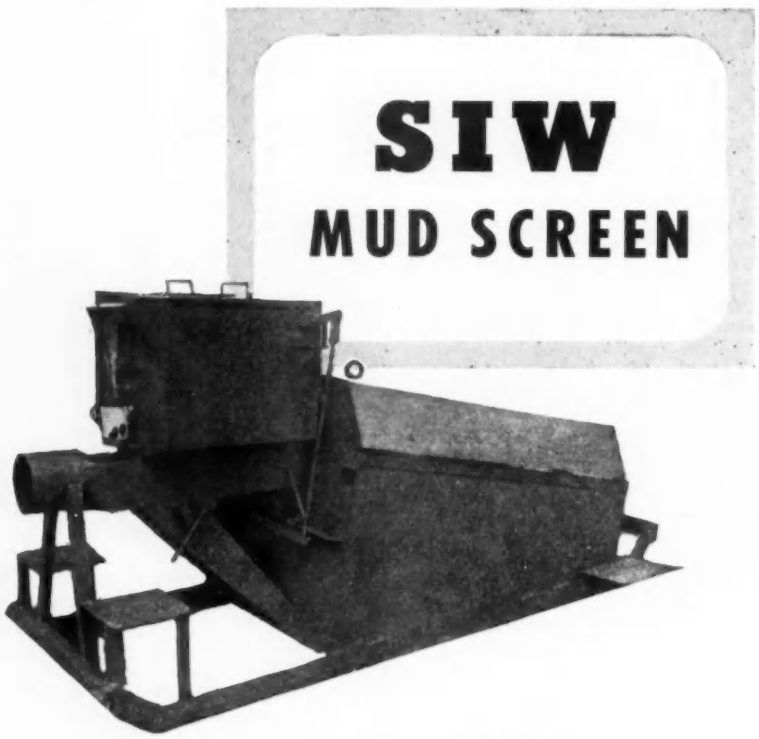
**Jasper County:** Sun Oil Company's Yost 1, NE SW SE 7-5n-14w, wildcat near Newton, Illinois, set casing for production test of McClosky lime at 2877-80 feet after a slight show of oil was recovered on a drill-stem test.

**Saline County:** Phillips Petroleum Company's Bunnell 1, NE NW NW 29-7s-5e, a semi-wildcat, made 125 barrels of oil and 2 barrels of water in 24 hours from sand after a 75-quart shot.

**Marion County:** Magnolia Petroleum Company was still testing at Robinson 1, NW SE NW 10-Wn-4e, a discovery in the eastern part of the county. Saturation was found in McClosky lime. Operators expected the well to yield 100 barrels of oil daily.

**Jefferson County:** Gulf Refining Company's Green 1, SW SW SW 23-1s-3e, in the West Divide pool, is one of the best producers completed in the state in several weeks. It showed 1124 barrels of oil in 24 hours from McClosky lime after 5,000 gallons of acid. Pay was encountered at 2726-27 feet and 2732-34 feet. Hole was bottomed at 2866 feet.

**Shelby County:** Phillips Petroleum Company has operations underway at its wildcat, Dove 1, SE SE NW 9-9n-4e, near Shelbyville.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## ☆ Michigan

### Test In Mecosta County Proves Disappointment

Mecosta County test disappointing; Deep River field extended; plans to abandon Essex Township wildcat dropped.

**Mecosta County:** Smith Petroleum Company's Ortwein 1, SE NW NE, 7-14n-7w, Wheatland Township field prospect, on pump for 6 days, averaged 36 to 47 barrels oil and 10 to 20 percent water. Failure of well to flow and water-cut caused considerable disappointment. The wildcat developed pay at 3684-88 feet, in top of the Dundee. Fisher-McCall and Sohio Petroleum companies have surveyed offsets.

**Arenac County:** Ervin Major's Wosniak 2, NW SW NW 15-19n-4e, extended the Deep River field nearly ½-mile southeast, producing at initial natural rate of 130 barrels oil per hour from Dundee at 2850 feet. Previously, dry holes in the same formation had been encountered on north and south 1320-foot offsets.

**Clinton County:** Union Drilling & Producing Company has sidetracked plans to abandon the Piggot 1, SE SE SW 30-8n-3w, Essex Township wildcat, after drilling Dundee section dry, and will deepen to test Sylvania sand. Dundee-Monroe top was logged at 2916 feet and hole originally bottomed at 3042 feet. It may be deepened 1000 to 1500 feet under the new program.

**Kent County:** Oil Producers, Inc., abandoned Apsey 1, NE SE NE 8-5n-11w, Gaines Township, after failing to establish commercial oil production in Traverse. The first field prospect for the area this year, the outpost carried 100 feet of oil in top of the Traverse at 1903-09 feet but it failed to improve by acidizing.

### Production Department Changes Made by Humble

Humble Oil & Refining Company, Houston, announces the following changes in supervisory forces of the production department:

B. Douglas Ragland, division petroleum engineer of the Southwest Texas Division, Corpus Christi, Texas, was transferred to the Houston office as petroleum engineer in charge of the petroleum engineering department.

Walker T. Dabbs, district superintendent, was transferred from the Wasson district, Denver City, Texas, to the Eucutta district, Waynesboro, Mississippi.

Phillip W. Harvey, district chief clerk, was transferred from the Wink district, Wink, Texas, to the Pampa district, Pampa, Texas.

S. C. Hanks, district chief clerk, was transferred from the Pampa district to the Wink district.

Charles P. Henton, district chief clerk, was transferred from the Pruitt district, Van, Texas, to the Pickton district, Winnsboro, Texas.

Herbert J. McDonald was transferred from the Stratton district, Kingsville, Texas, to the Government Wells district, Freer, Texas, as district chief clerk.

John R. Goddard, district chief clerk, was transferred from the Government Wells district to the Imogene district, Pleasanton, Texas.

## ☆California

### Permit Is Awarded For Test Under Tide Lands

Test planned under Seal Beach tide lands; only 14 wells drilling or being rigged to pump at Elk Hills Naval Reserve; 6 tests drilling in Costa Mesa area.

**Los Angeles County:** Marine Exploration Company, formed by Gilco, Inc., and The Texas Company interests, has been awarded permit by the state to test for oil under state-owned tide lands at the western edge of the city of Seal Beach. This point lies between Long Beach and Huntington Beach, and derrick site will be on shore with the hole to be drilled to a point under the ocean bed. The drilling program will be similar to the one used offshore at Huntington Beach.

Shell Oil Company's Stakemiller-Rose 1, deep test at Long Beach, has landed 602 feet of 3½-inch perforated liner at 10,673 feet and hung a combination string of 2½ and 1½-inch tubing at 10,639 feet for a production test. Same company's Alamitos 48A in the same field is drilling at 11,945 feet.

**Kern County:** On April 12, only 14 wells were actively drilling or being rigged to pump at Elk Hills Naval Reserve.This is the smallest number since the third week of the drilling campaign started to increase daily production to 65,000 barrels. Only 7 notices to drill new wells on the Reserve were filed during the week ending April 7, thus indicating the drilling campaign is nearing an end except for a few wells to maintain maximum production.

**Orange County:** Six tests were drilling in the Costa Mesa area on the higher ground overlooking Newport Beach, with 1 well pumping 50 barrels of 17.4-gravity clean oil. The producer is Delaney Petroleum Corporation's Karales 1, bottomed at 2520 feet, with production coming through perforations open at 1615-1690 feet and 2000-2050 feet. In addition to the 6 drilling wells, another location is being graded.

**Ventura County:** Eleven wells are now drilling the deep Ventura Avenue field and during the past week, Shell completed 2 producers for a combined production of 802 barrels of 31-gravity clean oil. The 2 producers are also making 589,000 cubic feet of gas.

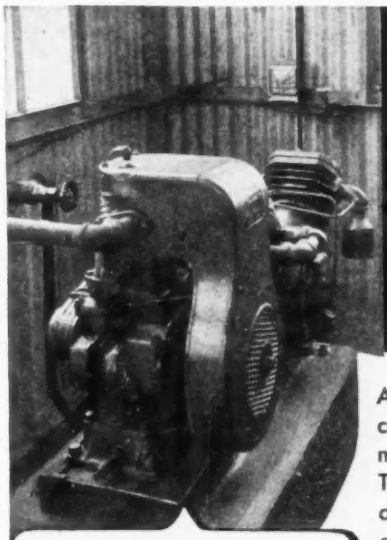
## ☆Rocky Mountain Area

### Fremont County, Wyoming, Wells Nearing Completion

Heavy snows hamper drilling operations over large area of Wyoming; wells in newly discovered Crooks Gap, Big Sand Draw and Bailey Dome fields are nearing completion; Wilson Creek has new producer; Madison well expected at Garland field.

#### Wyoming

In Fremont County Sinclair-Wyoming Oil Company has a pair of wells nearing completion in Crooks Gap field. Unit 2 made a drill-stem test at 4743-4770 feet, believed in the Dakota, open 18 minutes,

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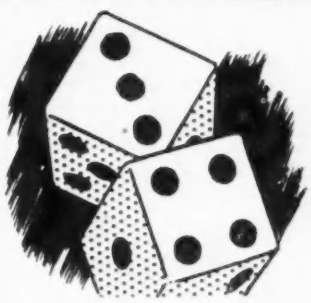

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and recorded a flow of gas estimated at the rate of 8 million cubic feet per day through a ½-inch choke. Flowing pressure was 1700 pounds per square inch. Sinclair's Unit 3 is making hole below 5000 feet and nearing the Lakota sand oil pay expected at around 5300 feet. In the nearby Big Sand Draw field Sinclair's second well to test the deep Tensleep zone, Unit 2 is drilling below 5900 feet in Red Beds nearing the Embar formation.

**Carbon County:** At Bailey Dome, Sinclair's Coffman 2 went into the Frontier at 3261 feet and is drilling below 3400 feet, with oil pay expected in the Tensleep near 5100 feet or deeper.

**Hot Springs County:** The Husky Refining Company is spudding a wildcat at Cedar Ridge anticline. It is Government 1, NW NW NW 28-43n-95w, 3 miles northwest of Thermopolis.

**Natrona County:** Kerlyn Oil Company's Government 1, NE SE NE 23-35n-79w, wildcat test of deep zones at Midway Dome, is going for the Embar and Tensleep with hole in the Red Beds below 7500 feet.

**Park County:** The Ohio Oil Company's KC-Ohio 11, north end of Garland field, has 5½-inch casing waiting on cement at 4915 feet with perforations expected opposite the upper Madison limestone where a test showed some oil from 4535-4600 feet. Ohio has staked a new location on the southwest side of Garland for KC-Ohio 12, NE SW NW 32-56n-97w.

Stanolind Oil & Gas Company's Unit 6, NE SW NW 1-47n-100w, Little Buffalo Basin field, has 7-inch casing cemented at 4915 feet. A drill-stem test in the Embar at 4715-4760 feet recovered 30 feet of oil and 170 feet of oil-cut mud in 1 hour with ½-inch lower choke and 1-inch top.

**Uinta County:** Mountain Fuel Supply Company's Unit 1, wildcat deep test at Church Buttes, is drilling below 5010 feet in the Wasatch formation.

### Colorado

The Texas Company-The California Company's Unit 22, SW SE SW 27-3n-94w, Wilson Creek field, was completed through a 5/8-inch choke flowing natural, gauged at 120 barrels of oil per day from the Sundance sand drilled to 6697 feet. The same operators are drilling Unit 20 in a deep test that may extend to the Granite. The drill departed from the Weber sand at 8369 feet and is in hard shale below 8600 feet.

Unit 23 was rigging up rotary and Unit 25 is drilling below 733 feet.

At Meeker Dome, Rio Blanco County, Stanolind's Scott 1, C NE NW 1n-93w, wildcat Weber sand test, has set surface pipe and is drilling near 500 feet.

## ☆ Canada

### *Activity In Conrad Area Spurred By Discoveries*

Activities increased in Conrad Area; extension completed in West Taber.

**Conrad:** Four light rotaries are going to work in the Conrad Area, South Alberta Plains, scene of 2 Ellis (Jurassic) sand discoveries of 26-28-gravity oil since mid-1944. Standard Oil Company of California, which made the discovery in July, 1944, is stepping up its operations from 1 to 2 rigs. Mid-Continent Oil & Gas and East Crest Oil Company, who made their discovery a month ago a mile north of the Standard strike, are working 1 rig, while Empire Petroleum Ltd. has started its initial venture at Conrad.

Ten completions over an area of about 20 square miles have indicated an oil-bearing, water-free sand, subject to widely varying porosity and permeability, following the presumed northwest-southeast trending shoreline of an ancient sea. Closure is formed by disappearance of the sand about a mile west of the line of producers. The sand thickens to the east (being about 40 feet at a wildcat 4 miles east of the producers).

Of the 10 completions, 4 are currently producing (pumping respectively, 250, 175, 125, and 75 barrels daily); 2, with some oil showing are still on test; 3 are abandoned, sand proving too tight to yield commercially; and 1, a mile west of the producers, abandoned after failing to find the sand. The oil is a black crude, 26-28-gravity, with depth to the Ellis ranging from 2936 feet to about 3200 feet over the area.

Now drilling in the area are Empire Petroleum's 1, lsd 12 16-6-15w4, 1½ miles north and ½-mile east of the Mid-Continent-East Crest 1 discovery well, and 2½ miles north of the Standard discovery well; Standard's Conrad-Province 37-5A, lsd 15 5-6-15w4, ¼-mile south of Mid-Continent-East Crest discovery; and Mid-Continent-East Crest 3, lsd 1 8-6-15w4, ¼-mile east of that team's discovery well. Standard is moving in a second rig, to be used at a site not yet announced, while the Mid-Continent-East Crest team will follow No. 3 with No. 4, staked in lsd 8 8-6-15w4, ¼-mile north.

**West Taber:** An extension test, expected to rate on pump at about 135 barrels daily, has been completed by Standard Oil of British Columbia and Nassau Explorations, Ltd., in the West Taber area, South Alberta Plains. The well is the third, and probably the best, of this team's completions in the area.

The well, Taber-Province No. 45-15A, lsd 10 15-9-17w4, topped the Taber (Lower Cretaceous) sand at 3185 feet; drill-stem tested at 3205 feet, showing 900,000 cubic feet of gas and some oil (135-foot column in pipe after 1 hour); cored to 3210 feet, drill-stem tested bottom 15 feet, showing 750 feet of 24.6-gravity oil in pipe after 1 hour. Seven-inch casing has been cemented at bottom, and will be perforated to open oil-bearing lower part of sand. Well is ⅜-mile southeast of nearest producer.

**Turner Valley:** Checks totalling $205,000 were mailed out by the Alberta Petroleum & Natural Gas Conservation Board last week to participants in leases, drilled and undrilled, in the Turner Valley area. The distribution, obtained by a levy on Royalite Oil Company, No. 1 gas and oil producer in Turner Valley, represents compensation to the other participants in the common pool for overproduction of gas by Royalite in 1943, when overproduction of its gas wells was necessary to meet gas market requirements. The Alberta Government ruled that value of the overproduction should be distributed to all those with interest in the pool. Job of calculating that value and its apportioning was recently completed by the Conservation Board.

### CALIFORNIA WILDCATS

**Kern County—Failures:** Trico O&G's Trico 24-2, 24-29s-21e, Sheep Springs area, abnd 5237 ft.

Amedada's S. P. 6-15, 15-29s-29e, Ant Hill area, Olcese 2264 ft, Jewett 3925 ft, abnd 4438 ft.

**Los Angeles County—Failure:** Continental's Bayly 1, 29-1s-9w, San Jose Hills area, volcanics, abnd 4007 ft.

**Yolo County—Failure:** Texas Co.'s Salisbury 1, 20-10n-1e, Dunnigan Hills area, base Capay sh, abnd 2993 ft.

### GEORGIA WILDCAT

**Echols County—Failure:** Hunt Oil Co.'s Superior Pine Products Co. 2, Land lot 317, Land dist 13, abnd 4066 ft.

### ILLINOIS WILDCATS

**Jasper County — Failure:** Pure's Boos 1-B, nw ne nw 28-6n-10e, abnd 2892 ft.

**Marion County—Failure:** Texas Co.'s Crowley 1, ne ne 15-4n-3e, abnd 2377 ft.

**Wayne County—Failures:** Superior's Dulaney 1, sw se ne 15-2s-5e, abnd 3296 ft.

Ashland O&R Co.'s Wilson 1, ne se ne 15-1s-8e, abnd 3279 ft.

### KANSAS WILDCATS

**Barber County — Failure:** Stanolind-Skelly's Chain 1, sec ne 7-31s-11w, Arb 4801 ft, abnd 4850 ft.

**Ellis County—Failure:** Royer, Farris-B&R Drlg. Co.'s Jacobs 1, nec se 26-11s-18w, Lans 3333 ft, Arb 3685 ft, abnd 3760 ft.

**Marion County—Failure:** Amerine, H. A.'s Weise 3, nw ne ne 36-19s-5e, Pay 1090 ft, abnd 1121 ft.

**Pawnee County—Failure:** Vickers' Hartman 1, nw nw sw 7-22s-15w, Simp 4095 ft, Arb 4100 ft, abnd 4127 ft.

**Rice County—Failure:** Inland Oil Co.'s Propelraiter 1, nwc of ne 18-18s-10w, Lans 2983 ft, Arb 3312 ft, abnd 3342 ft.

**Rooks County—Failure:** Palmer Oil Co.'s Denio 1, se sw se 9-8s-16w, Simp 3405 ft, Arb 3471 ft, abnd 3513 ft.

**Russell County—Failure:** Kingwood Oil Co.'s Hoover Est. 1, ne nw sw 36-13s-14w, Congl 3293 ft, Arb 3336 ft, abnd 3386 ft.

**Rush County—Oil Discovery:** Inland Oil Co.'s Peterson 1, se se sw 35-19s-16w, Arb 10 shots 3725-27 ft, flow 2951 bbls, td 3730 ft.

**Stafford County—Failure:** Sohio's Rader 1, nw ne sw 18-21s-11w, Simp 3521 ft, Arb 3561 ft, abnd 3600 ft.

### NORTH LOUISIANA WILDCATS

**DeSoto Parish—Failure:** W. I. Nowling's Boone 1, 1650 n 330 w fr sec of sw¼ 25-11-11, abnd 3510 ft.

**Caddo Parish—Failure:** James Forgotson's Cook Unit 1, 10-19-16, abnd 2785 ft.

### SOUTH LOUISIANA WILDCATS

**Beauregard Parish — Failure:** Amerada's Lutcher-Moore Lbr. Co. 1, 1975 s 663 e of nwc 23-6s-12w, abnd 8549 ft.

**Vermilion Parish — Failure:** Texas Co.'s Frank LeBouef 1, 3450 s 3100 e of nwc 32-12s-3e, S. Abbeville area, abnd 11,689 ft.

### MICHIGAN WILDCATS

**Allegan County—Failure:** Louis Zeelman's Shields 1, sw nw sw 36-4n-13w, abnd 1720 ft.

**Isabella County—Failure:** Chartiers Oil Co.'s Girvin 1, n½ ne nw 29-13n-3w, Dundee 3608 ft, abnd 3670 ft.

**Kent County — Failures:** Mich. Devonian's Westrate 1, nw nw se 9-5n-12w, abnd 1838 ft.

Oil Producers' Apsey 1, ne se ne 8-5n-11w, Traverse 1903 ft, so 1909 ft, abnd 1949 ft.

**Midland County—Failure:** Sun's Patterson 1, sw sw nw 35-15n-2e, Dundee 3640 ft, abnd 3814 ft.

### MISSISSIPPI WILDCATS

**Forrest County—Failure:** H. I. Morgan-Dilworth Hager s Batson-Hatten Lbr. Co. 1, c sw nw 20-1s-12w, elev 300 ft, Tuscaloosa 7160 ft, Massive 8357 ft, abnd 9748 ft.

**Green County — Failure:** Humble's Harry Stover 1, nec 20-3n-7w, elev 248 ft, cap rock 5618 ft, salt 5849 ft, abnd 5983 ft.

**Holmes County—Failure:** Sinclair-Wyoming's Sallie K. Chisolm 1, c nw sw 10-13n-1e, elev 247 ft, Tuscaloosa 5885 ft, Comanche 6445 ft, abnd 6666 ft.

**Lauderdale County—Failure:** M. H. Dees' Simmons-Wright Co. 1, nwc ne sw 4-7n-18e, elev 275 ft, jkd & abnd 1001 ft.

**Smith County—Failure:** Gulf's E. G. King 1, 8-10n-13w, elev 402 ft, Tuscaloosa 6939 ft, Massive 7949 ft, Comanche 8180 ft, abnd 8302 ft.

**Washington County—Failure:** O. W. Killam's Fisher 1, nec nw 7-17n-8w, elev 127 ft, Tuscaloosa 5180 ft, Comanche 5410 ft, abnd 7068 ft.

### MISSISSIPPI OUTPOST

**Jasper County—Heidelberg NW Extension:** Sinclair-Wyoming's W. A. Bethea 1, c se nw 12-1n-12e, 2¼ mi nw prod Heidelberg fld, Eutaw 4903 ft, Tuscaloosa 5460 ft, Massive 6484 ft, perf 48 shots 5006-13 ft, bailed through csg, pumped 14 bbls oil, 100 bbls sw, td 6520 ft.

### MONTANA OUTPOST

**Carbon County—Elk Basin Extension:** Carter's Henderson EB-4, ne sw se 27-9s-23e, flow 421 bbls 28-gr fr Tensleep, td 5313 ft.

### NEW MEXICO WILDCATS

**Eddy County—Failure:** M. D. Bryant et al's Williamson 1, c nw nw 10-21s-31e, elev 3615 ft, salt 950-2970 ft, lime 3925 ft, Delaware sd 4170 ft, abnd 4185 ft.

**Lea County—Oil Discovery:** Gulf's Paddock 1, c sw se 1-22s-37e, 1½ mi e of Penrose-Skelly Permian fld, 3 mi n by w of Drinkard-Yeso fld, elev 3356 ft, anhy 1210 ft, base salt 2410 ft, Glorietta 5170 ft, flow 610 bbls 38.4-gr oil, 5 % wtr, 1-in, fr Glorietta (Holt) perf 5200-30 ft, acid 6000 gals, td 5843 ft, pb 5795 ft.

**Roosevelt County—Failure:** Frank M. Hill-Ole Taylor's Caudell 1, c se sw 22-2s-30e, jkd & abnd 700 ft.

### OKLAHOMA WILDCATS

**Comanche County — Failure:** Texas Co.'s Weaver 2, sw nw se 19-4n-10w, abnd 2333 ft.

**Logan County—Failure:** Amerada's Dodd 1, se nw nw 31-18n-4w, abnd 6851 ft.

**Okfuskee County—Failures:** Sunray's Wilson 1, se se sw 2-13n-7e, Osw 2550 ft, Prue 2553 ft, abnd 2587 ft.

Amerada's Barry 1, ne ne sw 23-10n-10e, Wx 3960 ft, abnd 3993 ft.

**Pottawatomie County — Discovery:** Texas


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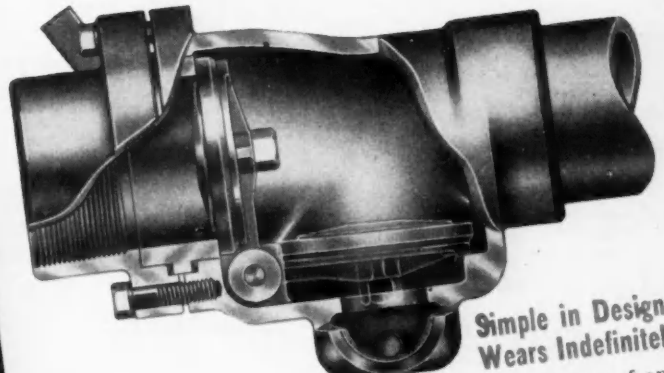

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Co.'s Vestal 1, nw nw se 28-6n-3e, Layton sd perf 60 shots 2854-78 ft, flow 20 mln gas, td 4463 ft.

### WEST TEXAS WILDCATS

**Andrews County—Oil Discovery:** Stanolind's University 1-P, c ne ne sect 44, blk 13, 3 mi s by e of Fullerton-Devonian 3-well fld, nearest, elev 3301 ft, Yates 2950 ft, San Andres 4460 ft, Glorietta 5751 ft, Tubb 6670 ft, Fullerton zone (dry) 6930 ft, Mississippi 8545 ft, Devonian 8760 ft, 339 ft low, flow 439 bbls 44-gr oil (0.42% sulphur, 56.5 octane) natural, ¼-in, Devonian perf 8750-70 ft, td 8855 ft, pb 8789 ft.

**Gaines County — Failure:** Sinclair Prairie's Johnson 1, c ne se PSL 16, blk A-28, elev 3536 ft, anhy 1590 ft, salt 1720 ft, Yates 2900 ft, San Andres 4280 ft, Glorietta 5590 ft, Tubb 6640 ft, base Permian 8050 ft, Silurian 8535 ft, abnd 8692 ft.

**Howard County — Failure:** Richfield Oil Corp.'s Shortes 1, c se nw T&P Ry. 1, blk 34, T-2-N, elev 2660 ft, Yates 1900 ft, San Andres 3160 ft, abnd 6010 ft.

### WEST TEXAS OUTPOST

**Schleicher County—Page Failure:** Cardinal Oil Co.'s Jess Koy 1, c ne sw GH&SA Ry. 34, blk L, 1½ mi n by e of gas, elev 2289 ft, Adams Branch 4605 ft, Strawn 5222 ft, solid li 5260 ft, abnd 5757 ft.

### WEST TEXAS NEW PAY TEST

**Hockley County—Slaughter Outpost Deep Failure:** Gulf's Mallet 23, 685 ft ewl 4027 ft snly PSL 2, blk X, 1⅞ mi sw of Slaughter, elev 3583 ft, salt 2340 ft, abnd 7536 ft.

### SOUTHWEST TEXAS WILDCATS

**Duval County—Failure:** M. E. Davis' Alliance Tr. Co. 1, 330 fr n&wl 100-ac lse, Santos Garcia sect 20 at Realitos, elev 450 ft, abnd 5450 ft.

**Webb County—Failure:** R. F. Schoolfield's Killam-Bruni 2, 990 fr nl 1040 fr wl 1600 fr el blk 2 on 320-ac lse, Albercas Gr, Brown subdvn, 720 s se well No. 1, abnd 2717 ft.

### SOUTHWEST TEXAS NEW PAY TEST

**Starr County—Boyle Discovery:** R. D. Farish's Sugarland Industries 1, 330 fr w&sl tr "E" and 100-ac lse, Porc 92 sh 7-B, 2000 e ne Goldston's 2-C, ½-mi e Boyle fld, sd 4031 ft, perf 4031-43 ft, flow 114 bbls 46.4-gr, 3/16-in, gor 750/1, tp 290 lbs, cp 975 lbs, td 4194 ft.

### LOWER TEXAS COAST WILDCATS

**Jim Wells County—Failure:** Republic Nat. Gas Co.'s Chas. L. Scott 1, 330 fr e&sl lot 9 330 fr sl blk 4 on 40-ac lse, LaGloria twnste, abnd 6667 ft.

**San Patricio County — Failure:** Fitzpatrick Dr. Co.'s Winnie K. Maricle et al 1, 467 fr n&sel 181.4-ac lse and sect 10 Taft Farm lds, abnd 6504 ft.

### UPPER TEXAS COAST WILDCATS

**Hardin County—Village Mills 1st Oil Discovery:** Houston Oil Co. of Texas-American Republics Corp.'s Fee-Hardin CSL 2, 6500 fr nl 660 fr el 956.7-ac lse, 6500 s of No. 1, disc well, elev 101.6 ft, sd 5797 ft, perf 20 shots 5797-5802 ft, flow 297 bbls 37.1-gr oil, 0.2% wtr, 3/16-in, gor 522/1, tp 835, cp 900, td 9559 ft.

**Matagorda County — Failure:** Hamill & Hamill's Texas Co. Fee 1, 280 fr wl 100 fr nl 31.14-ac tr, William Hudson sur on blk 6, w of Tres Palacios crk, abnd 3533 ft.

**Matagorda County—Oil Discovery:** Skelly-Stanolind-Tide Water's G. P. Hardy & Horn 1, 1140 fr wl 630 fr sl 450 fr nl 131-ac lse in blk 3, I&GN sur 4 and Henry Goslin sur 2, perf 10,095-123 ft, flow 48.8 bbls 41.5-gr oil, 5,288,000 gas, ¼-in, gor 136,290/1, tp 3775 lbs, td 10,844 ft.

**Wharton County—Failure:** J. B. Ferguson et al's Forrest L. Myers 1, 330 fr n&wl 6148-ac lse, A. Jackson 2 Lges Prairie Lge A-34, abnd 6263 ft.

### NORTH TEXAS WILDCATS

**Archer County—Failures:** Farmer & Hansen's Ikard 1, 150 ft nsl 1833 ft ewl of TE&L Co. sect 1890, abnd 1034 ft.

J. L. McMahon-H. M. Kelleher's Turbeville 1, 900 ft snl 150 ft ewl blk 148, Robt. Carson sur, abnd 1560 ft.

**Cottle County—Failure:** S. D. Johnson et al's Moss 1, 1170 ft snl 1787 ft ewl sect 3, A. Forsythe sur A-658, blk L, Leuders li 2180 ft, Cisco 2920 ft, Coleman Junction 2980 ft, Camp Colorado 3230 ft, Saddle Creek 3435 ft, Home Creek 4138 ft, chert 4168 ft, granite 5576 ft, abnd 5578 ft.

**Wichita County—Failure:** S. F. Hutcheson Jr., et al's Cody 1, 150 ft nsl 922 ft ewl blk 320, Waggoner Colony Lands, abnd 1960 ft.

### NORTH TEXAS NEW PAY TESTS

**Archer County—Shallow Pool Deep Failures:** Mrs. H. B. Wallace et al's Kempner 1, 350 ft nsl 2330 ft wel S.P. Ry. sect 2, A-987, elev 1043 ft, KMA li 3882 ft, Bend 4212 ft, Ellenburger 4615 ft, abnd 4638 ft.

Geo. W. Cooper et al's Ferguson-Continental 1, ne nw sw S.P. Ry. 2, A-1200, elev 1063 ft, KMA li 3994 ft, dry sd 4197-4206 ft, Bend 4506 ft, Ellenburger 4799 ft, abnd 4845 ft.

### WYOMING OUTPOSTS

**Hot Springs County—Kirby Creek Extension:** Pacific Western's Kyne 1, se sw nw 22-43n-92w, elev 4615 ft, pump 25 bbls 3 hrs, after acid, perf Tensleep 3344-3444 ft, Tensleep 3590 ft, Embar lm 3344 ft, td 3614 ft.

**Park County—Badger Basin Extension:** General Pet.'s Resolute 7, c nw sw 8-57n-101w, elev 4188 ft, flow 90 bbls 54.5-gr, 13/64-in, Frontier 8110 ft, tp 1080 lbs, cp 1300 lbs, td 8492 ft.

**Park County—Elk Basin Extension:** Carter's Johnson 5, ne se nw 8-57n-99w, pump 314 bbls fr Tensleep, td 5557 ft.

**Carbon County — Overland Dome Failure:** Cherry & Kidd's Morris 1, sw sw nw 30-20n-93w, td 4010 ft, pb & abnd 3590 ft.

### WESTERN CANADA WILDCAT

**South Alberta Plains—Tempest Failure:** Imperial Oil's Imperial-Tempest 1, lsd 4 27-9-19w4th, 25 bbls oil, 250 bbls wtr in Madison li, abnd 5112 ft.

## WILDCAT STARTS

### ARKANSAS

**Chicot County:** W. O. White's Evelyn W. Thudium, ne se 3-15-2, lcn.

### CALIFORNIA

**Kern County:** General Pet.'s Calloway 66-17, 17-29s-27e, Fruitvale area, lcn.

Hancock Oil's Muller D-1, 12-30s-30e, Mountain View area, lcn.

Richfield Oil's B.V.A. 72-25, 25-31s-25e, Buena Vista Lake area, lcn.

**Los Angeles County:** Seaboard Oil's L. A. Brick 1, 21-1s-13w, Los Angeles City area, lcn.

Signal Oil & Gas' Needham 1, 14-3n-16w, Nehall area, lcn.

Texas Co.'s Kern 2, 18-4n-17w, Del Valle area, lcn.

**Orange County:** Macoil Co.'s Townsend 3, 20-6s-10w, Costa Mesa area, lcn.

**Solano County:** Weckworth's 1, 20-4n-2e, Rio Vista area, lcn.

**Ventura County:** Los Neitos Co.'s C. & H. 1, 22-3n-21w, South Mountain area, lcn.

### COLORADO

**Rio Blanco County—West Douglas Creek:** General Pet.'s Government 1, c ne sw 24-2s-103w, lcn.

### ILLINOIS

**Jefferson County:** Magnolia's Witzel 1, ne nw se 22-1s-1e, lcn.

**Lawrence County:** Parriott & Sprowls' Mullins 1, ne ne se 35-5n-12w, lcn.

**White County:** H. H. Weinert et al's Milo 1, nw sw sw 4-5s-8e, dr.

### INDIANA

**Gibson County:** Ashland O&R's Smith 1, sw sw nw 34-3s-11w, lcn.

**Porter County:** St. Joseph Syndicate's Petersen 1, sw sw nw 8-36n-5w, lcn.

### KANSAS

**Barber County:** Aladdin & Landon's House 1, se se nw 22-30s-12w, lcn.

Lion O&R Co.'s Lemmon 1-C, se ne ne 20-30s-13w, lcn.

**Barton County:** Lion O&R Co.'s Wolf 1, ne nw nw 26-19s-15w, dr.

**Butler County:** Texas Co.'s Hutchings 1, se c 26-27s-3e, mirt.

**Lane County:** Skelly Oil Co.'s Fagerquist 1, nec 22-18s-30w, mirt.

**Ness County:** Transwestern Oil Co.'s Cornelsen 1, sw sw nw 29-18s-21w, woc.

**Rice County:** Keyes Drlg. Co.'s Zink 1, sec 34-18s-10w, mirt.

**Stafford County:** Stanolind's Hughes 1, ne nw se 13-23s-12w, lcn.

### KENTUCKY

**Hardin County:** H. W. Teague et al's Hood 1, 18-G-39, dr.

**Henderson County:** Fleming & Swann's Patterson 1, 1-O-22, lcn.

**Union County:** South Penn's Stevenson 1, 14-N-18, lcn.

**Webster County:** Sinclair Prairie's Cavenaugh 1, 12-N-23, lcn.

### NORTH LOUISIANA

**DeSoto Parish:** A. J. Bankhead's Porter 1, 1650 n 990 e swc 23-12-13w, 3000-ft test.

**Lincoln Parish:** California's M. N. Nobles et al 1, 1676 n 515 e swc 12-19-4w, 10,500-ft test.

### MICHIGAN

**Allegan County:** C. W. Cook's Simpson 1, se nw ne 29-3n-12w, dr.

**Mecosta County:** McClanahan and Atha's Waskowicz 1, nw sw ne 34-14n-9w, dr.

# The OIL WEEKLY'S TRADING POST

## USED EQUIPMENT FORUM

**CLASSIFIED ADS . . . EQUIPMENT . . . SERVICES . . . PERSONNEL**

### FOR SALE

## For Sale—Complete Rotary Power Rig

1—34-26 National Ideal Draw Works
1—122′ x 24′ Base API Steel Derrick with substructure
4800′—4½″ OD 16.60 lb. Gr. D Drill Pipe with 4½″ Hughes Extra Hole Flash Well Tool Joints (this pipe has made one well)
2—LRO Waukesha Engines (completely overhauled) with starting engine
1—42″ National Reverse Clutch
1—7¼″ x 16″ Universal Power Pump with V Belts (New)
1—6″ National Type AA Swivel
1—66″ National Traveling Block
1—9″ National Hook
1—23″ Brand New Ideco Streamlined Rotary Table
1—4½″ Baash-Ross Kelly
1—2½″ x 50′ Rotary Hose
1—8′ x 12′ New Steel Dog House
1—New Steel Tool Box
1—7½ KW Light Plant with FCU Waukesha Engine
1—6¾″ x 30′ Drill Collar
1—1⅛″ x 1350′ American Drilling Line
1—Martin Decker Weight Indicator
1—400 Ton Reagan Crown Block
1—Casing Wagon
1 Set Varco Drive Bushings
1 Set New 4½″ B. J. Rotary Tongs
1 Set B. J. Elevators
1 Set 72″ B. J. Elevator Links
1 Set Mission Slips
1—Wisconsin 10M Centrifugal Pump with 50′-2″ Hose
1—Water Softener
1—250 Bbl. Steel Water Tank
1 Set Steel Pipe Racks
1 Set Weco Canvas Windbreakers

*If interested in Rig in Excellent Condition capable of drilling 8000′, write, wire, or phone*

**FRENCH TOOL & SUPPLY CO.**
**Odessa, Texas**

## For Sale—Complete Rotary Power Rig

1—7½″ R B Unitized Draw Works
1—126′ Lee C. Moore Mast with 5′-6″ Substructure
5300′—4½″ OD 16.60 lb. Gr. D Drill Pipe with 4½″ API Reg. Tool Joints (Extra good condition)
1—42″ Houston Portable Reverse Clutch
3—EKH Waukesha Engines with starting engine
1—66″ National Traveling Block
1—6″ National Hook
1—23″ Mod. 12 National Rotary Table
1—7¼″ x 16″ Universal Pump (New) with V Belts
1—4½″ Baash-Ross Kelly
1 Set—4½″ Drive Bushings
1 Set—4½″ B. J. Elevators
1 Set—4½″ B. J. Rotary Tongs
1 Set—4½″ Mission Slips
1 Set—72″ B. J. Elevator Links
1—7½ KW Light Plant with FCU Waukesha
1—8′ x 12′ Steel Dog House
1—Steel Tool Box
1—6¾″ x 30′ Drill Collar
1—Lines Scale Weight Indicator
1—American Type L Overshot
1—1⅛″ x 1350′ American Drilling Line
1—Wisconsin 10M Centrifugal Pump with 50′-2″ Hose
1—Water Softener on skids
1—250 Bbl. Steel Water Tank on skids
All Necessary Hand Tools (List furnished)
1—2½″ x 50′ Rotary Hose
1 Set Steel Pipe Racks

*If interested in Complete Power Rig with all items in A-1 Condition and capable of 6500′ drilling, write, wire, or phone*

**FRENCH TOOL & SUPPLY CO.**
**Odessa, Texas—Ph. 1493**

### FOR SALE

■ For Sale: 1 Ideal 10 x 10 double drilling engine, A-1 Condition. Price $200.00. 2 Ideal 6¾ x 12 x 14″ drilling pumps. Price $150.00 each. Located my yard, Vicksburg, Mississippi. D. H. Williams.

■ FOR SALE: Oil and gas leases on structure and in shallow territory. Will furnish one or more leases for drilling contracts. W. P. Harley, Bowling Green, Kentucky.

■ 1—13½ x 20—Bessemer Compressor Cylinder, $400.00; 4—12 x 12—Ingersoll-Rand Compressor Cylinders, $200.00 each. Lesh & McCall, Nocona, Texas.

■ Drilling Crews — Several 16x16 pyramidal tents, 16 oz. duck, good condition, weight approximately 100 lbs. — $18.75 each f.o.b. Rockdale—Cash or C.O.D. W. H. Orr, Rockdale, Texas

■ FOR SALE: General Electric Induction Motor—Model 2475—15/30 H.P.—3 Phase—60 Cycle—440 Volts with grid and jack shaft. Neil Moore, Eastland, Texas.

**FOR SALE BY OWNER AT SILICIA, KANSAS WAREHOUSE**

125,000 ft. Used 3″ Upset Tubing
20,000 ft. Used 2⅛″ Upset Tubing
3,000 ft. Used 4″ Lapweld Line Pipe
3,300 ft. Used 3″ Upset Cement Lined Tubing
50,000 ft. Used Jones Type 7 Sucker Rods ⅞ & ¾
3,000 ft. New 3½″ 150 lb. test Johns-Manville pipe with fittings
500 ft. New 4″ 150 lb. test Johns-Manville pipe with fittings
2,000 ft. New 6″ 150 lb. test Johns-Manville pipe with fittings
3,600 ft. New 7″ 24 lb. 8 Rd. Thd. Seamless Steel Casing Grade H-40 Range 2
3,200 ft. New 7″ 24 lb. 10 V Thd. Seamless Steel Casing Grade H-40 Range 2
4,000 ft. Used 7″ 24 lb. 10 V Thd. Seamless Steel Casing Grade C Range 2
5 Lee C. Moore Standard Rig fronts with 11′ band wheels complete with 5 O.C.S. counter-shaft clutches. Happy Idlers for long & short belts and 40 H.P. Weber gas engines, galvanized iron engine houses & belt halls that have been Tnemecized.
5 94′ Ideco 330,000 lb. galvanized derricks. Tnemecized complete with galvanized bolts, two sheave crown blocks and guy wires. Standing.
1 94′ Ideco 330,000 lb. galvanized derrick complete with two sheave crown blocks. Not erected.

Subject to prior sale, withdrawal from market

**J. H. Tatlock, Wichita 2, Kansas**
**L.D. 18 or Local 4-6336**

### SITUATION WANTED

■ Man with thirty years experience in the land and producing sections of the oil business as individual producer and part of this time as vice-president and executive of a Major Independent Oil Company wants connection with independent interests or financing to carry on developments and other work in connection with producing business. Address: Box 11, c/o The Oil Weekly, Houston, Texas.

### WANTED TO BUY

■ Want to Buy—Late model 1500 foot Failing Rotary drilling machine or similar machine for small hole drilling. C. A. Simpson, Bisbee, North Dakota.

■ Want four Nixon Gas Lifts in usable condition. Give complete details and price. Box 49, c/o The Oil Weekly, Houston, Texas.

### SERVICES

**WM. M. WELLS**
**Geophysicist**

Seismograph Reviews
And Interpretation
Gravity Meter Surveys

**209 First National Bank Bldg.**
**Shreveport, Louisiana**

**MISSISSIPPI**

**Clark County:** Carter Oil Co.'s Long-Bell Pet. Co. 1, c sw ne 14-4n-16e, lcn.

**Jasper County:** Gulf's R. C. Gregory 1, ne sw 9-10n-12w, Tuscaloosa test.

**Neshoba County:** H. H. Hamilton's B. A. Ritchie 1, c ne ne 3-12n-12e, lcn.

**MISSOURI**

**Putnam County:** Dan McLaughlin et al's Johnson 1, se of sw 14-65n-21w, rum.

**OKLAHOMA**

**Beckham County:** Gulf's Day 1, se ne se 12-8n-22w, lcn.

**Canadian County:** J. E. Trigg's Fee 1, ne sw 22-13n-7w, mim.

**Comanche County:** T. H. McCasland's School Land 1, sw sw ne 16-1n-9w, dr 1600 ft.

**Creek County:** C. E. Beal's Vickers 1, nw se nw 9-16n-10e, mim.

**Garfield County:** Herndon Drlg. Co.'s Moore 1, nw nw se 14-23n-3w, dr 1055 ft.

Ace Gutowsky's Zalcudek 1, nw sw 21-24n-6w, lcn.

### LEASES, DRILLING ACREAGE, ETC.

■ Driller, Would you complete a well first year for sizeable lease 15/16 free, geology uncertain? John H. Smith 406 First Natl. Bank Bldg., Longview, Tex.

### HELP WANTED

**—WANTED—**

**MECHANICAL AND ELETRICAL ENGINEER**

Oilfield Equipment Manufacturer of International prominence located in Beaumont, Texas, desires to employ qualified Mechanical or Electrical Engineer to assist in the design of D.C. Electric Drilling Rigs. Good salary, with unlimited post-war possibilities. All answers strictly confidential. Address: Box 6, c/o The Oil Weekly, Houston, Texas.

■ Wanted by a consulting geophysical organization, Petroleum Engineers with Hayward Mudlogging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancment to managerial positions throughout the world. Address: Box 36, c/o The Oil Weekly, Houston, Texas.

**WANTED**

Manufacturer's representative calling on makers of oil field equipment in Oklahoma to sell a well established complete line of roller bearings to existing and potential trade. Engineering background essential. Related lines important. Commission. Address: Box 22, c/o The Oil Weekly, Houston, Texas.

Eastman Oil Well Survey Company has position open for field Sales and Service man in Louisiana Gulf Coast area. Applicant must have good knowledge of and be well acquainted in oil and drilling industry. Attractive salary. Expenses and car furnished. Address written application to Box 890, Lafayette, Louisiana.

**MAJOR OIL COMPANY WANTS GEOPHYSICAL PARTY FIELD AGENT—GOOD POSITION FOR RIGHT MAN**

Experience in South Louisiana marsh and water areas important. Some technical knowledge and experience with boats desirable. Apply by letter giving experience and references. Interview to be arranged. Address: Box 17, c/o The Oil Weekly, Houston, Texas.

**ADVERTISING RATES**

## TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

**Trading Post Section, The Oil Weekly**
**P. O. Box 2608 Houston 1, Texas**

NOW I ASK YOU-

- Do you really believe I am the proper person to do this sort of work? I do not!
- In fact, I am just about as efficient at this as the average sand pump or clean-out bailer is at cleaning out an oil well.
- Confidentially, if you want a real clean-out tool go to your nearest supply store and order the tops among all clean-out tools . . .

"THE MIDCO BAILER"

- Every individual feature of the MIDCO contributes in some degree to the almost unbelievable results obtained.
- Large volume of sales in both Domestic and Foreign fields permits maintenance of price competitive with any clean-out tool.
- Distributors located in practically all fields make replacement parts readily available.
- G-TYPE has solid steel plunger rod—exceptionally sturdy construction throughout.

Standard cable tool pin permits Jars and Sinker to be run above pump, eliminating fishing jobs.

- F-5 TYPE has patented plunger construction to assure highest possible efficiency in this type of pump.

PATENT No. 2061486
2090055 — 2090209
2176231 — 2187042
Other Patents Pending

TYPE G

TYPE F-5

TYPE-G TYPE F-5

For additional information see COMPOSIT CATALOG, Page 1903
Call, wire or write

MIDCO BAILER CO.
1006 - 1012 S. E. 29th STREET
TELEPHONE 7-8586 BOX 1542
OKLAHOMA CITY • OKLAHOMA


**Grady County:** Big Chief Drlg. Co.'s Beelar 1, se sw sw 11-6n-7w, rur.

**Grant County:** Derby Oil Co.'s Powell 1, ne ne nw 19-29n-5w, lcn.

**Kiowa County:** Amerada's Weide 1, sw ne ne 31-7n-16w, lcn.

**McIntosh County:** J. T. Hall's Ahrens 1, nw se 32-10n-13e, dr 1944 ft.

**Oklahoma County:** Stanolind's Bednar 1, nw nw sw 23-13n-1e, lcn.

**Pottawatomie County:** Atlantic's Kennedy 1, sw se ne 22-9n-3e, lcn.

Public Service Co.'s Bell 1, ne nw 17-7n-4e, lcn.

### WEST TEXAS

**Andrews County:** DeKalb Agricultural Assn's Lockhart-Brown 1-C, c nw sw PSL 12, blk A-41, 1⅝ mi ne Martin pool disc, 8000-ft Basal Clear Fork test.

**Borden County:** Standard of Tex.'s J. R. Canning 1, 466 ft out nec se¼ H&TC Ry. 103, blk 25, 5500-ft San Andres test.

**Kent County:** Sohio's Bert Wallace 1, c sw nw H&TC Ry. 55, blk 98, 4 mi ne Clairemont, 8000-ft Ellenburger test.

**Reagan County:** Union of Cal.'s J. R. Scott 1-D, 1984 ft snl 1987 ft ewl T&P Ry. 176, blk 1, 2900-ft cable test.

**Upton County:** DeKalb Agricultural Assn's Burleson 1, c w¼ of e¼ H&TC Ry. 65, blk 35, ½-mi ne McCamey, lcn 8000-ft Ellenburger test.

### WEST CENTRAL TEXAS

**Fisher County:** Sohio's Mrs. Keith Newman 1, 330 ft out nwc subdvn 6, John Rodman sur 2½, 3¼ mi se Roby, ⅓ mi n of 4500-ft failure, 6500-ft test.

**Jones County:** Hedrick Oil Co.'s C. H. Moore 1, 330 ft wel 990 ft nsl lot 2, or 330 ft wel 4400 ft snl T&P Ry. 21, blk 14, 2000-ft cable test.

Phillips' W. E. Foster-Pearl (Pan) 1, 980 ft out nec sw¼ T&P Ry. 17, blk 16, 2300-ft cable test.

**Shackelford County:** Hedrick Oil Co.'s Mrs. Chloe Nail 2, nw ne nw E.T. Ry. sect 121, 1800-ft cable test.

Mass-Tex O&G Co.'s Eliza Brazzell 1, 330 ft out nwc of e½ TE&L Co. sect 1664, ½-mi s by w of 4460-ft failure, 4500-ft cable test.

### SOUTH CENTRAL TEXAS

**Atascosa County:** J. W. Gorman-McDermott's U. A. Domsch 1, 933 ne of nec sect 1223 440 e of sel sect 1222½ but in J. T. Russell sect 1222 coring 3700 ft.

**Guadalupe County:** Wiegand Bros. Dr. Co.'s B. R. Ussery et al 1, 150 fr ely nel 150 fr sly nwl 500-ac lse, W. G. Hunt sur, 2300-ft test.

**LaSalle County:** Quintana Pet. Corp.'s South Texas Synd. 3-F, 2500 fr m/sly&wly/wl 96,000-ac lse 330 fr m/wly nl A. J. & J. Dull sur 112, 38,750 nw of well 1-F, 2 mi sw Washburn fld, 8000-ft test.

Quintana's South Texas Synd. 4-F, 5200 fr sec Mrs. Mollie Fox fee, 19,500 sw of well 1-F on 96,000-ac lse, Amanda Burks sur 104, lcn.

### SOUTHWEST TEXAS

**Duval County:** American Republics Corp.'s Dowell Co. 1, 330 fr sel 1263 fr nel J. Poitevent sur 550 780-ac lse, elev 522 ft, 2500-ft test.

**Starr County:** K. D. Owen-P. R. Rutherford's Mrs. B. A. Pierce 1, 467 fr sl 1266 fr wl 292 fr el tr 12 on 40-ac unit porc 93, 4200-ft test.

### LOWER TEXAS COAST

**Calhoun County:** Humble's Mrs. C. T. Traylor 1, 3450 fr sel 1650 fr swl 2000-ac lse, Juan Maldonado Gr, Wolf Point area, 11,000-ft test.

**Hidalgo County:** Hamman O&R Co.'s John & George Hamman 3, 10,707 fr el 21,689 fr nl Jackson subdvn of Milado tr and 24,000-ac lse, San Salvador del Tulle Gr, 12,000 s sw of well No. 2, 8000-ft test.

**Live Oak County:** Wright Dr. Co.'s Mrs. M. A. Hinnant 1, 660 fr nw&swl 80-ac lse & Ed Quinn sur, 6500-ft test.

**San Patricio County:** Bridwell Oil Co.'s Hertha C. Willman 1, 330 fr sel 330 fr swl 148.6-ac lse, Delgado Gr, 5500-ft test.

**Victoria County:** Butcher-Arthur-Taylor Ref. Co.'s M. H. Williams et al 1, 330 fr nel 330 fr nwl 1493.3-ac lse 330 fr nwl Fulgencio Buene sur 1200 fr nel 1743-ac tr, elev 112.2 ft, 5000-ft test.

Navarro Oil Co.'s E. L. Byrnes 1, 467 fr nw&swl 199-ac lse, T&NO sur 6 blk 4, 7500-ft test.

Navarro's Elsie W. Koehl 1, 467 fr sw&sel 234.8-ac lse, T&NO sur 6 blk 3, 7500-ft test.

### UPPER TEXAS COAST

**Chambers County:** Glenn H. McCarthy's W. C. Tyrrell Trust 2, 1320 fr wl 660 fr sl 1050.3-ac lse, T&NO sur 83, 2500 n of McCarthy's Weibelhaus 1, N. Stowell Ext. 11,500-ft test.

**Ft. Bend County:** Stanolind's Selma Jaeggli 1, start e cor 100-ac lse go 1154 sw alg sel 330 nw at ra to lcn in sect 19 sw of Big Creek prod, Barnabus Wickson sur, 6750-ft test.

**Harris County:** General Crude's Mrs. Harold Bishop 1, 660 fr wl 682.4-ac lse and W. M. Francois sur, 2500 fr sl lse 4500 fr nl 660 fr wl sur, 7500-ft test.

**San Jacinto County:** Navarro Oil Co.'s Foster Lbr. Co. 1-A, start s cor Polk CSL sur go ne alg sel Polk sur 3250, th se at ra 1100 to lcn in Taylor sur 4750 e ne of Navarro's Foster 1, disc well, Cold Springs area, 12,500-ft test.

**Wharton County:** Hudgins, Ferguson & Hutchins' F. B. & Donald Duncan 1, 5150 fr m/sly/sl 1800 fr wly/el of Alexander Edgar sur, 3000-ac lse, Egypt area, 4000-ft test.

### EAST TEXAS

**Houston County:** James Papadakis et al's Houston Coal Co. 1, 240 ft fr nwl 800 ft fr nel of 21.7-ac tr, E. W. Goolsby sur, 10 mi s of Crockett, 3500-ft Wilcox test.

### NORTH TEXAS

**Archer County:** F. L. Harvey et al's J. D. Laster, Jr., 1, 150 ft snl 1350 ft ewl of M. Pickens sur A-341, sd 1255 ft.

Fortex Oil Corp. et al's Morbitzer-Waggoner 1, 467 ft out nec s½ nw¼ sect 62, blk 3, Clark-Plumb sur, lcn 1800-ft test.

Delbar Co.'s H. Foerster 1, 990 ft out sec blk 39, Harris subdvn, lcn 1400-ft test.

Delbar Co.'s C. L. Abercrombie 1, 1650 ft ewl 1500 ft snl blk 153, Harris subdvn, lcn 1250-ft rotary test.

L. Eric Jones et al's Mrs. O. Slopansky 1, 750 ft ewl 1350 ft snl of blk 64, Harris subdvn, lcn 1500-ft rotary test.

**Cooke County:** Horwitz & Oldom's Joe Havercamp 1, 330 ft snl 1600 ft fr m/w/wl of Wm. Nelson sur A-794, lcn 2200-ft rotary test.

**Montague County:** Fisher & Buckingham's T. R. Copeland 1, 2950 ft e 2150 ft s of nwc of Newton Kimbro sur A-405, lcn 800-ft cable test.

**Throckmorton County:** Cochran & Cain's B. S. Walker 1, 150 ft out of m/n/sec of W. Bramlett sur A-26, sect 5, lcn 1000-ft test.

### WYOMING

**Converse County:** Carter's Unit 1, c sw nw 19-33n-68w, lcn.

**Big Horn County:** Swarthout - Griffith's Spence 1, nw ne sw 4-54n-94w, lcn.

**Hot Springs County:** Husky Refining's Government 1, nw nw nw 28-43n-95w, dr.

### WESTERN CANADA

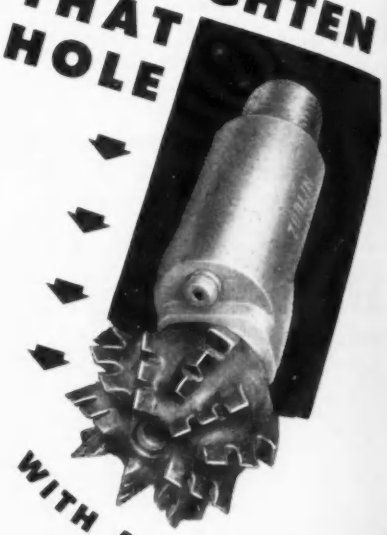
**South Alberta Plains—Conrad:** Empire Petroleum's Conrad 1, se lsd 12 16-6-15w4th, dr.

California-Standard's Conrad-Province 37-5A, se lsd 15 5-6-15w4th, dr.

Mid-Continent O&G-East Crest Oil Co.'s No. 4, se lsd 8 8-6-15w4th, lcn.

**Saskatchewan — Aberdeen:** Saskatoon-Aberdeen G&O Co.'s Aberdeen 1, lsd 9 6-39-2w3rd, ru.


STRAIGHTEN THAT HOLE



WITH A ZUBLIN SIMPLEX BIT

EIGHT interchangeable cutters of heat treated and hard surfaced steel. For drilling through cement, collapsed casings and variable formations and straight holes.

See Composite Catalog or Bulletin and information upon request.

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BAKERSFIELD, VENTURA AND AVENAL, CALIFORNIA

## SQUEAKS from the BULL WHEEL

### That Shushed Him

The credit man at a department store recently received this letter:

"Dear Sir—Once a month my wife and I put all our bills on the table, draw six at random and pay them. If you give us any more of your impudence, you won't get a place in the shuffle next month."

### Back Some Day

"Maid, do you know anything about my wife's whereabouts?"

"Yessir, they're at the laundry."

### Be Specific

"Your age, madam?"

"Around thirty."

"I can see that, madam; but how many years since you got around it."

### Restless Critter

Fond Mother: "Yes, the little dear has been walking almost a year."

Bored Visitor: "Amazing! Can't you make him sit down?"

### Just Pipe Dreams

Two U. S. Indians in a foxhole were discussing the cause of the war. "The way I figure," said one, "when they smoked the pipe of peace in 1918, nobody inhaled."

### Exit Private Jones

"May I see the General?"

"Yes, ma'am. Go right in."

"You're sure he won't mind?"

"Oh, no. He always has time for pretty girls."

"In that case, would you mind telling him his wife is here?"

### Poet's Nook

One night an old man of Algiers
Drank seven and seventy beers.
He would have kept on,
Except that by dawn
It was squirting from his ears.

### Encore

It's nothing much to think about,
But every now and then
We wonder where ol' Gandhi
Carries his fountain pen.

### The Ancient Answer

"Let's get married or something."

"We'll get married or nothing, old dear."

### Fair Trade

"Say, Jones, I got me a hat just like the one you've been wearing."

"That so? Where'd you get it?"

"Oh, it was a surprise from my wife."

"Surprise?"

"Yeah, I came home and found it on the dining room table."

### Badder the Gooder

"Gimme a kiss like a good girl."

"Okay, but if I give you one like a bad girl you will like it better."

### This Curious World

A Navy officer complains that when he meets a WAVE on the street he never knows whether she's squaring her hat, fixing her girdle or saluting.

Statistics show that in a year the average American girl buys 3.5 hats. The Easter fragments we see on the streets must be the .5.

Kissing a girl because she lets you is like scratching a place that doesn't itch.

Sign on a slot machine: "In case of an air raid, crawl under this machine—it's never been hit."

A cynic says that marriage is like a cafeteria. You grab something that looks nice and pay for it later.

She was only a coalman's daughter—but, oh, where she had bin!

Two men named Wood and Stone were standing on a corner when a beautiful woman walked by. Wood turned to Stone. Stone turned to Wood. They both turned to rubber. The woman turned the corner.


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Weigh a great deal less . . . have a substantially higher safety factor . . . and are easier on your pocketbook.

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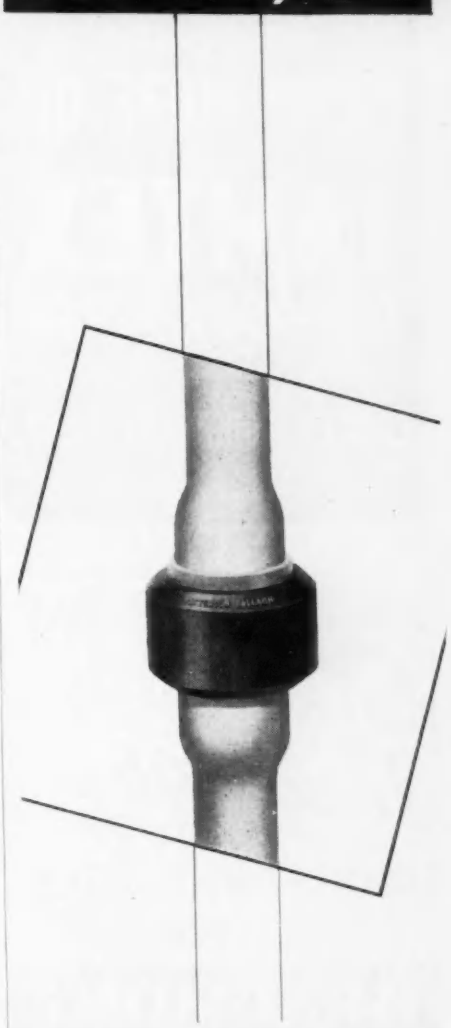


**Cut Metal-to-Metal Contact**

These oil-proof, insulating, wear-resistant, plastic tubing protectors are an integral part of the tubing collar. Made in all sizes, they prevent the metal-to-metal contact that causes many expensive "wet" jobs in pumping wells. Without this contact, the collars do not wear holes in the casing.

*See Composite Catalog*

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See LAMTEX, Composite Catalog, pages 1570-1571

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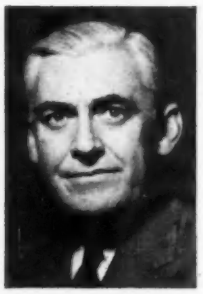
## MEN IN THE INDUSTRY NEWS

**Robert P. Russell**, president of Standard Oil Development Company, has been named a member of the nine-man civilian committee to appraise results of strategic air bombing in Europe.



R. P. Russell

The commitee, known as the United States Strategic Bombing Survey, will analyze the effect of air bombardment on the will and capacity of the enemy to resist. Findings of the survey are expected to aid in the war against Japan, and will provide valuable data in studying the potentialities and future development of air power. A report will be submitted to the Secretary of War within a few months of termination of hostilities in Europe.

**Dr. Joseph N. Breston,** for many years on the staff of Pennsylvania State College, has accepted an assignment with the Pennsylvania Grade Crude Oil Association in its production research laboratory at Bradford.

**H. C. Jorgensen,** geologist for Phillips Petroleum Company before entering military service, was recently decorated by the Chinese government with the Chinese Grand Star of Honor medal. He is on duty at a field installation of the Chinese Combat Command. Jorgensen is one of the relatively few Americans to receive this decoration.

**Brantley Jackson,** Magnolia Petroleum Company, was reelected president of the Jackson Land Men's Club at the annual meeting in Jackson, Mississippi. Other officers elected are **C. F. Kimball,** Sinclair-Wyoming Oil Company, vice president, and **C. H. Fidler,** Tide Water Associated Oil Company, secretary-treasurer. Members of the board of directors are **Bob Hart,** Cities Service Oil Company; **Jack Kennedy,** Texas Pacific Coal & Oil Company; **Charles Horton,** Shell Oil Corporation, and **Maurice Miesse,** Phillips Petroleum Company.

**Irwin Lamp** of The Pure Oil Company has joined the staff of District 2, PAW, as assistant to the director, succeeding **Phil Denton,** who has returned to Sinclair Oil Company in New York.

**T. E. Swigart,** president of Shell Pipe Line Company, addressed the Fourth Industrial Planning Conference on Power at the University of Texas, Austin. His subject was "Oil Pipe Lines." **Dr. W. T. Thom, Jr.,** professor and chairman of the Department of Geological Engineering, Princeton University, spoke on "Energy Resources and National Power."

**H. S. Chase,** vice president in charge of manufacturing, Eastern Division, and **Drew L. Hines,** vice president in charge of the transportation and supplies department, Eastern Division, have been elected directors of Tide Water Associated Oil Company. **K. R. Hankinson,** vice president and treasurer, has been appointed a member of the Eastern Division operating committee. Hines was also appointed vice chairman of the Eastern Division operating committee.

**Duncan Neblett,** secretary of Eastern States Petroleum Company, Houston, was recently elected a vice president, and **Martial J. McKinney** was elected treasurer. McKinney was formerly assistant treasurer.

**W. G. Green,** president, Engineering Laboratories, Inc., and **Earl Porter,** Amerada Petroleum Corporation, both of Tulsa, have been elected councillor and vice president, respectively, of the University of Oklahoma Research Institute.

**H. F. Zoller,** Wichita, Kansas, has been reelected president and general manager of the Derby Oil Company. Other officers reelected included **S. P. Wallingford,** vice president; **E. C. Claiborne,** treasurer; **E. Wasser,** secretary and vice president; **F. W. McCurry,** vice president in charge of manufacturing; and **L. M. Woodward,** assistant secretary. **Hale T. Ritchie** was reelected chairman of the board of directors.

**A. J. Crowley,** Fort Worth, Texas, addressed the Tulsa Geological Society in Kendall Hall, Tulsa University, on "Beds of Ellenburger Age in North Central Texas."

**J. T. Davidson** of Wewoka, Oklahoma, for 21 years an employe of Phillips Petroleum Company, has gone on the retired list. He was a pipe line walker for the company and estimates that during his 21 years he covered more than 80,000 miles on his inspections. More than 100 employes attended a farewell dinner at Wewoka marking his retirement.

**James McMeekin-Kerr** recently joined the faculty of the University of Houston. McMeekin-Kerr has been assigned to the staff of the school of communications to teach a new course in the pre-induction radio-radar school.

McMeekin-Kerr

He recently came to the United States from Great Britain, where he had considerable experience in electronics. He served in the British navy as lieutenant of communication-intelligence.

**Fred G. Nunneley,** Canadian sales manager of Caterpillar Tractor Company, Peoria, Illinois, since 1935, has resigned to become general manager of Powell Equipment Company, Ltd., Winnipeg, Canada.

Fred G. Nunneley

Nunneley is a native of London, England, and came to America in 1909, taking up land in southern Saskatchewan. In 1928 he became a district representative in the Canadian territory for Caterpillar. He was appointed assistant sales manager in 1931 and in 1935 became Canadian sales manager.

**O. H. Beshell,** Olden, Texas, district superintendent for Magnolia Pipe Line Company, has been transferred to Danville, Indiana, as superintendent of the Midland division, succeeding the late **J. G. Austin. D. R. Ford,** assistant superintendent of the Houston district with headquarters at Beaumont, relieves Beshell at Olden, while **M. E. Bay,** construction foreman at Alice, Texas, has been promoted to assistant superintendent of the Houston district.

**S. B. Irelan,** president of Cities Service Gas Company, Oklahoma City, Oklahoma, has been elected to the board of directors of the Cities Service Company, succeeding Valentin R. Garfias of Mexico City, resigned.

**Lieut. Thomas R. Shockey,** formerly with Amerada Petroleum Corporation, Tulsa, has been missing in action over Austria since March 31. He was a co-pilot of a B-24 attached to the Fifteenth Air Force in Italy and had been overseas since December, 1944.

**A. G. Bussman** has been named vice president in charge of sales for Wickwire Spencer Steel Company, New York City. Bussman has been with the company since 1930.

**William A. Rock** has been named resident engineer of the Corpus Christi, Texas, district for The Foxboro Company, Foxboro, Massachusetts. James M. Tuttle has joined the company's staff of engineers at Pittsburgh, Pennsylvania.

**Matt Koener** has been appointed chief inspector for Caterpillar Tractor Company, Peoria, Illinois. He joined a predecessor company as an assemblyman in 1919 and in 1927 was assigned to gear inspection in the Peoria plant, becoming a supervisor in the inspection division six months later. In 1934 he was made assistant chief inspector and remained in that position until his present promotion.

**Floyd C. Merritt** has been named a vice president of Byron Jackson Company, Los Angeles.

Merritt was graduated from Leland Stanford University in 1910 and made the first exploration of Venezuela's Maracaibo basin in 1912. He joined **J. E. Elliott** in the formation of Elliott Core Drilling Company in 1922 and served as vice president and general manager until the firm was acquired by Byron Jackson in 1939. Transferring to the latter company, he served as works manager of the oil tool division and in other executive capacities until his recent election to the vice presidency.

**Gordon W. Reed** was reelected chairman of the board of the Texas Gulf Producing Company at the annual meeting of stockholders and directors. Other officers reelected were **Lawrence S. Reed,** president; **Val. T. Billups,** vice president; **William H. Hendrickson,** vice president and treasurer; **John M. Carter,** secretary and assistant treasurer.

**M. E. Montrose,** former director and vice president and manager of services and sales of Lane-Wells Company, has been elected president, general manager and a director of the Marion Steam Shovel Company, Marion, Ohio. He was associated with Lane-Wells for ten years before his resignation in February. Previously, he was with General Electric Company in various capacities for 13 years.

**Douglas W. Vernon** has been appointed general sales manager of A. Leschen & Sons Rope Company, St. Louis.

## Deaths

**Stephen M. Birch,** advertising manager of The Texas Company, died in New York City April 10.

Birch, 50, was born at Robinson, Illinois, and attended the University of Illinois and the University of Pennsylvania, which he left in 1917 to join the Army ordnance department. In 1919 he entered the employ of Erwin, Wasey and Company, Chicago advertising agency. He left the firm in 1921 to go with Fairchild Publications in Chicago, but returned in 1928 as assistant service man. During this time the Indian Refining Company account was assigned to him and when The Texas Company acquired control of Indian he continued with the account, going to the New York office of Erwin, Wasey in 1929. He became manager of The Texas Company's advertising division in 1938.

**Wray Richards,** philanthropist and Texas oil man, died April 16 at Luling, Texas. Richards, 48, headed the W. R. Drilling Company and Wray Richards tank enterprises. He operated offices in Longview, Houston, Corpus Christi, Alice and Luling.

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STANDCO BRAKE LINING
Is the driller's best friend because it makes the easiest brake known and "feeds off" evenly while drilling. It never scores brake rims. See page 2808 Composite Catalog.
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TRADING POST SECTION
ON PAGE 97 OF THIS ISSUE

# NEW EQUIPMENT . . . LITERATURE

## 1—Printer-Developer

Charles Bruning Company, 4754 Montrose Avenue, Chicago 41, is introducing a new model printer-developer for making black and white prints. This machine, Model 41, combines individual printing and developing units in a modern cabinet with a sturdy, all-steel frame of box girder construction.

It has a printing speed range up to 6 feet per minute, with a printing width of 46 inches. The light source is a 2000-watt glass mercury vapor lamp within a six-inch diameter cylinder, and a new method of cooling pulls air into and through the cylinder and contact bands, resulting in minimum machine temperature.

Printing speed is controlled by a single dial. A front pedal located at floor level and at the center of the machine, instantly releases band tension so that misfeeding of roll stock can readily be corrected.

Prints are delivered at the front of the machine within easy reach of the operator. Mounted on casters, the outfit can be moved to any desired loaction.

## 2—Power Booster

Talk-A-Phone Manufacturing Company, 1512 S. Pulaski Road, Chicago 23, Illinois, announces an improved power booster for inter-office communication systems. The improvement makes possible inter-office communication and factory or plant paging facilities on the same system.

The HP-16 power booster is capable of delivering a minimum of 15 watts "voice range" power. More than one booster can be used where greater power levels are necessary. Special type speakers are available.

The booster unit, HP-16, measures 6x12x6¼ inches. It is equipped with on-off switch, pilot light indicator, and variable volume control. All controls are easily accessible and the unit may be placed anywhere near the master station. The units are connected to the master station by only four wires furnished with the booster.

## 3—V-Belting

The B. F. Goodrich Company, Akron, Ohio, announces addition of an "A" section to its line of open-end V-belting. Open-end belting is widely used where endless V-belts do not meet the requirements, and is now available in four standard sections of the same cross sectional dimensions as endless V-belts, allowing use of standard sheaves.

These sizes are the "A" with 17/32-inch top width and 5/16-inch thickness; "B" with 21/32-inch top width and 7/16-inch thickness; "C" with ⅞-inch top width and ⅝-inch thickness; and "D" with 1¼-inch top width and ¾-inch thickness.

Extension of the application of open end V-belting has been made possible by development of a new fastener.

Speeds of below 3000 feet per minute are recommended for most efficient operation of open end V-belting. The minimum recommended pulley diameters for the "A" section are 3 inches, "B" section 5.4 inches, "C" section 9 inches, and "D" section 13 inches.

## 4—Safety Hook Latch

The Thomas Laughlin Company, Portland, Maine, announces an improved safety latch for its safety hook. The wider throat opening results from the way the latch assembly, when open, straddles the neck of the hook. The load to be hoisted is easily slipped into the hook but cannot be removed until the operator's fingers release the latch.

If the hook is overcrowded, the latch will not snap into place. If the hook spreads because of excess loading, the latch pops up as a warning signal.

Made of pressed steel in the smaller sizes and cast bronze in the larger, this improved latch is riveted at the neck of the hook to a cam which is an integral part of the hook forging. The latch is actuated by a stainless steel wire spring which coils around the hub of the cam on each side and extends down the inside of the latch.

Safety hooks with these new latches are modifications of standard eye, straight shank and swivel types with safe working load capacities from ½ to 15 tons.

## 5—Plastic Coatings

Oil Trading Company, 30 Rockefeller Plaza, New York 20, New York, announces that positive control of corrosion by air-drying plastic coatings is now possible. Exterior coating films have been developed which are unaffected by exposure to petroleum products or vapors, dilute mineral acids or alkalis such as hydrogen sulphide, sea water, salt in air or solution. These films are non-conductors and therefore prevent electrolytic corrosion, it is claimed. They also have a high degree of ductility, excellent abrasion resistance, and being fireproof, will not support combustion. They are said to effectively prevent corrosion and are applied in the same manner as paints.

Interior coatings made by the company have the same characteristics and remain unaffected by crude oils, gasoline, distillates and other fractions of lower than 30 percent aromatic content.

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FOR YOUR CONVENIENCE: Check or circle the numbers identifying the information you want; send this coupon to The Oil Weekly and your request will be promptly passed to the manufacturer. Be sure to indicate your complete mailing address.

**THE OIL WEEKLY**
**P. O. Box 2608, Houston 1, Texas, U.S.A.**

**Please have the manufacturers send me, without obligation, more information or literature on items checked below. (Numbers correspond to descriptive paragraphs as shown in April 23 issue of The Oil Weekly):**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

Company_____

Name_____ Title_____

Address or P. O. Box_____

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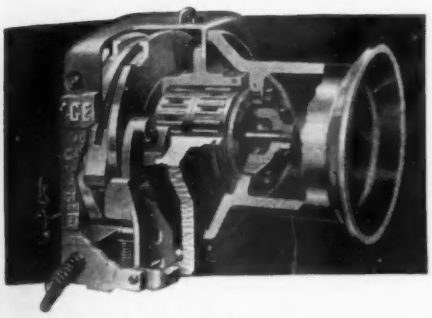
**(Print or type clearly name, company and address)**



## 6—Automatic Cathead

Gemco Oil Tools, 3115 South Grand Boulevard, St. Louis 18, Missouri, announces an improved cathead to be known as the Gemco Automatic Cathead. A number of features of this device are said to be outstanding, including:

A one-piece all steel housing which prevents twisting from side pull of jerkline and premature wear on the bearings.

Continuous dove-tailed groove machined on the flanges of the rotating member retains and guides the jerkline shoe in its movement around the drum.

A cover enabling quick inspection and repair. The cathead can be operated when the cover is removed.

The actuator (clutch pin) is induction hardened for maximum service, and cannot be engaged or disengaged accidently.

The disengaging cam is induction hardened and welded to the steel housing to prevent any possible dislocation. The clutch disengagement is positive.

A felt seal retains lubricant and keeps out dirt.

The jerkline shoe is lightweight, and of hardened steel. Minimum impact results from engagement and there is no impact upon disengagement. The engaging cam is positively moved into its effective or idling position by the rotary movement of the jerkline shoe and prevents repeat movements of the jerkline. The cam is carefully designed to insure positive full engagement and cannot be accidently engaged.

The operating lever is radially adjustable to eight positions. The control line can be located at the convenience of the operator and will not kick.

Large twin roller bearing, one-piece bronze cages and ground alloy steel rolls, minimize friction and wear.

Removable spool makes for greater road clearance.

## Literature

### 7—Diesels

The Diesel Engine Manufacturers Association, 1 North La Salle Street, Chicago 2, has published a booklet, "The Story of the Diesel."

In concise, non-technical, easy to read style it discusses the Diesel's postwar future, its present fields of application, and advantages over other types of power. The beginning and development of the industry are also covered.

A chart depicts graphically the industry's enormous growth in horsepower-output from 1937 to 1944. In 1937 a production of barely 2,000,000 horsepower was recorded. This had leaped to 35,000,000 for last year.

### 8—Rotameters

Cochrane Corporation, 17th and Allegheny Avenue, Philadelphia 32, Pennsylvania, has a new publication on rotameters. In addition to catalog material on the company's line of products, the booklet includes data on the selection of a rotameter for any service. Specific gravities of gases and of various metals used in floats are given, together with formulae for converting water and air capacities to terms of other liquids and gases. Other selection factors such as pressure drop, length of scale and float material are covered.

### 9—Design Chart

Spang-Chalfant Division of National Supply Company, Pittsburgh, has published a quick design chart for making up casing strings. The charts offer a graphic method for the selection of combinations, based upon minimum performance properties, as set forth in API Code 5-C-2, Third Edition, July, 1944.

### 10—Valves

Merco Nordstrom Valve Company, 400 N. Lexington Avenue, Pittsburgh 8, has issued a revised catalog covering the products made by the company. The catalog consists of 134 pages of valve listings and specifications, engineering tables, lubricant data, etc., and presents the latest information on these items.

### 11—Chain Belt

Chain Belt Company, Milwaukee 4, Wisconsin, has published a four-page folder on the Rex Table Top Chain Belt. The leaflet shows the outstanding points in construction and describes details which make this type chain different from others.

### 12—Steel

Allegheny Ludlum Steel Corporation, Brackenridge, Pennsylvania, has published catalogs on carbon and high speed steel drill rods and cold drawn tool steels and carmet carbide blanks and carbide tipped tools.

### 13—Gas Analysis

Burrell Technical Supply Company, 1936-42 Fifth Avenue, Pittsburgh 19, has published a catalog, No. 80, which contains complete descriptions of gas analysis apparatus and a thorough manual for gas analysts.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**For rugged, year 'round service, let us figure with you on your oil field equipment from skids to stairs—pumping units, welding sleeves, AND—Any type of sectional steel buildings in any height, width or length in multiples of two feet.**

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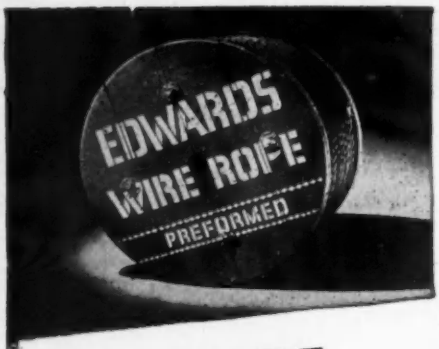


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Or we could say: "Not a kink in a carload!"

We tip our tin hats to the cigarette folks who know how to capture the popular phrase for their products.

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E. H. EDWARDS COMPANY


## Wins E Award

United States Rubber Company, Rockefeller Center, New York, has been awarded the Army-Navy E at the Passaic, New Jersey, plant, for efficient production of essential war products.

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• Indicates detailed information on products and services included in 1943-1944 edition of Composite Catalog of Oil Field and Pipe-Line Equipment.


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## Hanlon-Waters and McAlear Firms Combine Operations

Hanlon-Waters, Tulsa, and McAlear Manufacturing Company, Chicago, have combined operations and will conduct business as the Automatic Control Division of Climax Industries, of which Climax Engineering Company is also a division. The three companies, affiliated for the past year, have heretofore operated as separate businesses.

L. J. Griffey

General manamement, sales and engineering are also being centered under single heads in charge of these executive functions for McAlear and Hanlon-Waters plans. Edward F. Deacon, Climax president, has announced the following appointments: L. J. Griffey, vice president and general manager; M. C. Waterman, vice president in charge of engineering; and C. W. Snyder, vice president in charge of sales.

## Hunt Exports Establishes Headquarters in Houston

Hunt Exports Company, formed recently to represent Hunt Tool Company and other manufacturers of oil industry equipment in countries outside the United States, has established headquarters at 1945 St. Bernard Street, Houston, home office of Hunt Tool Company.


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